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J. J. CASSIDY, M.D., EDITOR.

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A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

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Original Contributions.

CLUB-HAND.

BY B. E. McKENZIE, B.A., M.D., TORONTO,

Member of the American Orthopædic Association, Surgeon to the Toronto Orthopædic Hospital, Assistant Prof. of Clinical Surgery in the Ontario Medical College for Women, Toronto, Surgeon in the Out-Patient Department of General Hospital.

THOUGH deformities of the foot and leg are comparatively common, as seen in congenital club-foot, bow-legs, knock-knee, genu retrorsum, flat-foot and various contractured states depending upon paralysis, yet deformities of the hand, except those of a minor kind, such as web-fingers, are comparatively rare.

Reasons may easily be assigned why disease is more common in the joints of the lower extremity than in those of the upper, but it is not so apparent why club-foot should be so much more common than club-hand. The lower extremity is much more liable to traumatism, owing to its being the weight-bearing member. It is thus exposed to jarring and twisting when any misstep is made, and it is subjected to severe toil for many hours continuously, thus having present some of the conditions which favor the development of tuberculosis, which is the cause of so large a proportion of disease in the extremities.

That deformities of the upper extremity are much less common than those of the lower will be seen by a brief reference to literature touching this subject. Kirmisson, in his monumental work on "Surgical Affections of Congenital Origin" (1898), devotes seventy-one pages to the former and two hundred pages to the latter. In ten volumes of the Transactions of the American Orthopædic Association five articles appear on the one subject of club-hand and twenty-eight on that of club-foot.

Club-hand is sometimes of the acquired variety, and dependent upon cicatrices from burns, upon disease of the bones of the arm, interfering with growth of the lower epiphysis of the radius or ulna, upon disease of the bones of the hand, upon fracture of the bones of the hand or arm, or upon paralysis.

It may be doubtful whether some of these conditions should be classed as club-hand. The most marked cases of the deformity, however, are congenital, and frequently caused by defects in the bones.

Case 1.—A. L, eighteen years of age, has the right hand flexed to a right angle with the arm. When a child of about five years he fell while holding a sharp stick in his hand, which, entering his mouth, passed through the palate and base of the skull and into the brain, resulting in convulsions, and paralysis of the right side

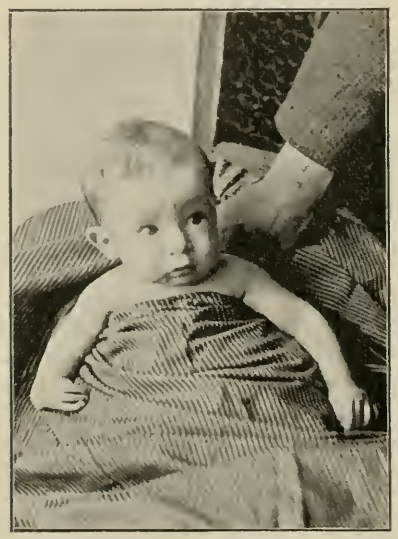

Fig. 1.

Fig. 2.

of the body, involving the face, arm and leg. Lack of symmetry in the face is not very noticeable, and the lower extremity has so far recovered as to enable him to walk with only a slight limp. The arm is much atrophied, and contracture of the flexors has occurred at both elbow and wrist. The hand is held at about a right angle with the arm, and the fingers are so flexed as to form a hook-like condition, which is found useful in handling objects. As there was a desire to improve the condition, and as it was thought that the greatly shortened flexor tendons would probably fail to unite if cut and the hand fully extended, the wrist was excised and the hand placed in line with the arm, leaving the fingers their hook-like contraction. Unfortunately, the pressure applied in keeping the hand fully extended caused some sloughing at the

back of the wrist, and from this source of infection osteomyelitis of the radius resulted. Recently a sequestrum about four inches long was removed, and now the parts are healing rapidly, leaving the hand in good condition.

Case 2.—R. A., eight years. This boy is large and very stout. He has strongly marked talipes equino varus, and double club-hand. The hands at the wrist are flexed to an angle of about 120 degrees, the fingers are hyperextended at the metacarpophalangeal joints about 35 degrees, and flexed at the interphalangeal joints. As there is but very little power to move the fingers and hands, I have not thought it wise to make any effort to correct the deformities except by manipulations and massage frequently done by the boy's mother. This boy is intellectually bright and docile, but owing to the great degree of motor paresis he has not learned to walk, and he uses the hands but imperfectly. There is little doubt that the deformities are due to a congenital cerebral lesion, which has not caused any intellectual defect, nor the spastic conditions which are so common in the cerebral palsies of infancy.

Case 3.—B. H., boy one year old. The deformity here is due to absence of the radius. Birth was natural. The right hand and part of arm were found tucked in under the inferior maxilla of the right side, making a depression in the side of the neck which did not disappear for several months. The right radius is absent and the hand is deflected toward the radial side of the arm and the carpus articulates with the radial aspect of the lower end of the ulna (Fig. 1). The thumb, at birth, was found attached only by a slender strand of tissue devoid of bone or tendon.

Fig. 3.

This member was cut away with scissors, and but little hæmorrhage resulted. The fingers toward the radial aspect, though complete in their skeletal elements, were much more defective in formation than those (fourth and fifth) of the ulnar side. The same condition in regard to the function of the digits was found in other cases where the radius was absent and is of medico-legal importance. Under chloroform all tendinous and ligamentous restricting bands, made tense by pulling the hand ulna-ward, were cut subcutaneously and the hand secured for a month in a gypsum fixation splint, so that the skin and other tissues in the angle between the hand and arm were put on the stretch. Subsequently still further extension was attempted by the aid of a light brace, but without much further improvement. When a year old the child was brought to the hospital, and through an incision over the lower end of the ulna this bone was set free, and one of the median bones of the carpus removed so as to make a cup for the reception of the end of the ulna.

It was retained in place by a strong thread of silk passed over the end of the ulna and deep into the carpus, and the whole secured in a gypsum dressing so as to keep the hand deflected toward the ulna. Subsequently the presence of the strong silk, buried in the carpus to secure fixation, gave some trouble and was removed. The hand, as shown in figure 2, is nearly in line with the arm; there is motion at the new joint and the function of the part is

Fig. 4.

gradually improving. When at play the left arm is strapped to a belt behind the back so as to secure more exercise of the defective limb.

Case 4.—McD., a boy one year old, no radius in right arm, no thumb on right hand, which was deflected toward the side of the radius much as in the last case. Function of the ring and little fingers is better than that of those toward the radial side of the

hand. About three-fourths of an inch was removed from the end of the ulna and the hand deflected strongly toward the ulnar side and secured by a fixed dressing for several weeks. A year and a half afterward the position of hand was found much improved, and the child was using it freely in play (Fig. 3).

CASE 5.—B., girl, six months, healthy. Absence of tibia from each leg, and of ulna from left arm (Fig. 4). The different effect produced by the absence of the ulna is very marked when this case is compared with those in which there is no radius. The thumb and index finger are well developed and evince good function while the other digits are entirely absent. There are only two metacarpal bones and the radial portion of the carpus. It is not possible by examination to determine exactly what carpal

FIG. 5.

bones are absent. No operative or mechanical treatment is called for. When two years old the child was using the hand to only a moderate extent, due, no doubt, to the defective elbow joint, and consequent defective leverage.

CASE 6.—H. G., twelve years old (Fig. 5), a boy who presents deformity of both arms and hands. At birth he had an occipital meningocele, which was injected and afterwards removed. The radius is absent from each arm, the hand joining the ulna at an angle of 80°, and articulating with the lower end of the ulna on its radial aspect. The ulna projects downward so as to form an acute angle at its junction with the ulnar border of the hand. There are only four digits on each hand, the thumb being absent. The digits toward the ulnar aspect are better developed and have

better function than those of the radial border. The index finger of the right hand is so much distorted and so useless as to call for amputation. A pencil can be used between the ring and little fingers, and he can write fairly well. Both hands were operated on by cutting subcutaneously all restricting tendinous and ligamentous structures in the angle between the hand and the arm, and forcibly extending the hand, which was retained for several weeks in this position Subsequently massage was employed,

Fig. 6.

and function improved. Opportunity has not been afforded to obtain photographs since the boy returned home, but figure 6 shows the position of the left hand after the first operation, and figure 7 shows an outline tracing of both hands.

Of the various cases here presented three of them illustrate a well-marked variety, viz., where the radius is absent, and the hand presents defects both functional and anatomical. The etiology of these cases is obscure, and the trend of opinion at the present time is to assign amniotic adhesions as the most important factor. I

want to refer to two cases, however, which have much significance as indicating that abnormal position and consequent intra-uterine pressure is, at least in some cases, a cause of bone defect. The first is described in Case 3. Here at birth the defective hand and arm were found folded under the inferior maxilla, where a depression remained in the side of the neck for several months. The other is a case reported by me in the New York *Medical Journal* of February 20th, 1897, and shown at the Toronto Medical Society, March, 1898. In this boy there are defects of the third, fourth and fifth ribs of the left side, extending from the sternum 4 inches outward, and also skeletal defects of the left hand. It is found that the left hand is easily placed over the thoracic defect, and that

Fig. 7.

it fits nicely into the same. It seems a reasonable assumption that the failure in normal development in both of these cases was due to abnormal position, and consequent undue pressure.

It is difficult to understand why the amniotic theory, as advanced, has received so much credence as the only rational explanation of congenital absence of the long bones. It is not only the fibula which is defective in the lower extremity, but the tibia also. When the latter bone is absent and the former well developed, it is not easy to understand how the theory is to be applied. Similarly the ulna is sometimes found to be absent and the radius well developed, where the skin shows no scar-like markings (*v.* New York *Medical Journal*, February 20th, 1897, McKenzie, and Hoffa's Orthopadische Chirurgie, 2nd ed., p. 470).

It seems probable that not all cases are to be explained in the same way. Some defects, doubtless, are due to such adhesions, but other causes afford a better explanation in other cases. It is very important also to observe that the development and function is much less complete on that aspect of the hand which corresponds to the bony defect in the arm. If this were not observed and noted previous to operation, its existence subsequently might be assigned as a cause for seeking damages.

In the treatment of these cases one must be guided by the individual conditions found present. When the radius is absent I think the best procedure yet described is to perform free tenotomy and fasciotomy in the angle formed by the hand and arm, and having forcibly extended, to retain for several weeks in a fixed dressing. Subsequently the end of the ulna should be freed and implanted in a cavity prepared for its reception in the centre of the cubital aspect of the carpus. Afterwards much gain in usefulness may be obtained by attention to the education of the defective hand by forcing its employment in play and in the ordinary duties of life. At night a well-fitting light brace will easily retain the hand in full extension.

ANTITOXIN IN THE TREATMENT OF DIPHTHERIA.

BY A. B. EADIE, M.D., TORONTO.

Antitoxin is a valuable remedy in the treatment of diphtheria. Statistics giving results obtained from its use have been collected in abundance from private practice and from isolation hospitals in many lands. On the whole, the figures given show that antitoxin has effected a remarkable decrease in the death rate from diphtheria.

Antitoxin not only lowers the death rate, but it also alters the whole clinical aspect of the disease. This fact has been overlooked by many writers in their efforts to produce a convincing array of statistics bearing solely on the rate of mortality. In many cases the improvement in all the symptoms occurs so quickly after administering antitoxin and is so pronounced that the correctness of the diagnosis is doubted.

The results obtained thus far show clearly that antitoxin is not a specific for diphtheria under all circumstances and conditions. We have, no doubt, much yet to learn about it. Still, some points in regard to its use appear to be fairly well established, and it seems wise that some of these should be emphasized.

Reports from all quarters agree that the best results are obtained when the antitoxin is administered early. The importance of this cannot be overstated. It is not yet possible to deter-

mine the exact time after the appearance of the first symptoms that antitoxin ceases to be of any value. It is certain, however, that cases treated on the first, second or even third day do much better than those treated later.

The necessity of using the remedy early makes the diagnosis a very important matter. On the one hand, it is desirable that antitoxin should be given only to patients who have diphtheria, and on the other hand, we must remember that every hour of delay diminishes the chances of success, and to a certain extent at least jeopardizes the life of the patient. Much valuable time is lost by waiting for a bacteriological report before using the serum. The main difficulty arises in mild cases where, from the nature of the symptoms and the appearance of the parts affected, a diagnosis cannot, with any degree of absolute certainty, be made from the clinical symptoms alone. However, in view of the fact that antitoxin does no harm, even when diphtheria is not present, an error in diagnosis is not a serious matter. In every case where there is at least a strong probability that diphtheria is present, the serum should be used without delay.

In ordinary cases where the larynx is not involved, 1,000 antitoxic units is considered to be a sufficient dose. In the laryngeal form 2,000 to 2,500 antitoxic units are recommended.

The dangers from the use of antitoxin appear to have been magnified. It is true a number of sudden deaths following its administration have been reported. The serum, like blood, is somewhat viscid and sticky. For this reason bubbles of air are more apt to be contained in it than in an ordinary aqueous solution. The details in the reports of some of these cases where death followed suddenly the injection of antitoxin, have led many to believe that the fatal results were caused by the injection of air along with the serum. With care all air may be quite easily excluded, and when this is done the injection of blood serum should be absolutely devoid of danger.

The question as to who makes the best quality of serum is not easily settled. In nearly all my cases, that made by Parke, Davis & Co. was used. Gibier's, of the Pasteur Institute, New York, was used twice, and Mulford's once. Each gave satisfactory results. The plan of sealing the bottle, adopted by Parke, Davis & Co., appears to be a decided improvement over the old style of cork.

Blood serum is complex and unstable in its nature, and is likely to deteriorate with age, and for this reason should be as fresh as possible when used.

Antitoxin has been used in fifty of my own cases. In forty-eight of these the diagnosis was verified by Prof. Shuttleworth, of the Toronto Board of Health. There were two deaths. Both of the fatal cases began with mild attacks. One was first seen on the fifth day, and the other on the sixth day of the disease.

In nearly all these cases antitoxin was the only remedy employed, no gargle, spray, or internal medicine being used. Most

writers recommend some form of non-irritating antiseptic wash or spray for the throat or nasal passages, as the case may be. With children who struggle and resist the application, their employment might do more harm than good. The tincture of iron, solutions of the bichloride of mercury, or other medicines given internally do not appear to interfere with the action of the antitoxin. Whether they are often of any service is, in my opinion, fairly open to doubt.

Antitoxin has robbed diphtheria of most of its terrors. If all the patients could be seen early the mortality from this dire disease would certainly sink to a very low point. Our experience with it has been highly satisfactory, and has convinced us of its undoubted superiority over any and all other remedies

DIPHTHERIA, WITH SPECIAL REFERENCE TO THE LARYNGEAL CASES REQUIRING A CHOICE BETWEEN TRACHEOTOMY AND INTUBATION.*

BY A. GANDIER, SHERBROOKE, P.Q.

MR. PRESIDENT, LADIES AND GENTLEMEN,—Let me first disclaim any idea of giving you anything original, or anything that may be of value to many of you. I write and hope to provoke discussion only for the benefit of the general practitioner in private practice, more especially in smaller towns and the country.

I have had, perhaps, unusual opportunity to see the disease and its treatment from both the standpoint of the hospital surgeon and specialist, on one hand, and the practitioners mentioned, on the other, and I know, owing to the surrounding circumstances, the problem is infinitely more difficult to the general practitioner. At first thought it may almost seem necessary that I should apologize for taking up your time in discussing a subject which, no doubt, many of you think worn thread-bare long ago.

I well remember my first days at medical association meetings. Then papers on diphtheria were always in order, and those to whom we younger men listened with awe, almost with fear and trembling, because of the exalted position they had attained in the world of medical and scientific thought, were ever ready to discuss the vexed problem as to what should be done with our diphtheria cases.

One of the greatest bones of contention was whether the disease was at first only local or constitutional. So common, so long continued and so fierce were these discussions that in spite of our respect for the weighty opinions of these our foremost teachers, we sometimes almost dared to wish they would let even such important matters as their theories of the location of the disease first, last or forever alone, and tell us something definite from their clinical experience, even though such knowledge must be empiric, to which

* Read at the Canadian Medical Association, Quebec, August, 1898.

we might nail our faith when suddenly confronted with cases of the dread disease.

Few troubles are more certain to be met with, sooner or later, by every practitioner from the least experienced and veriest tyro to the happy one whose experience has been so wide and favorable as to lead him to dread the questions of diagnosis, treatment and prognosis of ordinary diseases as little as their discussion in the abstract. Even to the latter diphtheria was, as a rule, in those days a serious matter.

Some of us have seen physicians who were, as a rule, perfectly confident in their own powers, go in fear and trembling to diphtheritic cases and stand several feet away from the patient, even nearly across the room, where any proper inspection was entirely out of the question, let alone proper physical examination, tell the devoted mother or nurse, who, casting aside all fear, is doing all in her power, to hold down the tongue while they professed to make the necessary examination. It was then in order to prescribe varied remedies and hurry away, happy to have over a visit to a very unwelcome case. This is one side of the story, and I would not mention it to our disgrace, only to show in what fear diphtheria was held in those days even by some of those called on to treat it who are supposed to fear nothing, and that it is more than blotted out by faithful and heroic spirit of practitioners in general, who would do anything in human power to cure or relieve their patients, even to the almost reckless and really unnecessary risk of sucking out a tracheotomy tube.

This should not be done, as the object can be as well attained in other ways, and we are not called on to become martyrs where nothing is to be gained. It is one thing to discuss a disease in convention, another to run the risk of dangerous infection ourselves or more dreaded risk of carrying contagion to our families. Yet all this has been done at the call of duty, and done many times by many members of this profession, of which we are so justly proud. Such was the state of things in past years, and I only mention it now to give a warning by comparing it with the present.

At that time treatments were almost as many and varied as were practitioners. Treatment was of all kinds from the simplest to the most complicated. Amazed at the number of remedies advised, each as being one of the best, I chanced to count those noted in a few hours' reading. The number of distinct and different remedies was upwards of 120. Doubtless that number could be more than doubled by extended reading. In the list are names of drugs, official and unofficial, common and rare, the mildest in action as well as the most severe, the cheapest and the most expensive in all the pharmacopœia and out of it. If any proof were needed that we had no specific or efficient remedy, that array is the most convincing.

The old treatment of diphtheria is a thing of the past and not worth considering now except as a lesson for the present. We were

then at one extreme; we used everything and had confidence in nothing. True, every little while a new and almost specific treatment was heralded by some observer, and he brought statistics of a greater or less number of cures, with few or no deaths to prove it, but alas, when we tried it on our cases, like the rest it utterly failed. What are we to think? Are we less skilful in the use of remedies than other observers? No, but when the promoter of the remedy tried it in other epidemics it failed, like all other remedies, and he was forced to admit his vaunted specific a failure. These disappointments arose from the fact that epidemics occasionally occur in which almost any rational or even irrational treatment is sufficient. I know this from sad experience. As house-surgeon of a general hospital, I had charge of a great many diphtheria cases. A very large number passed through my hands without a single death, and I began to think diphtheria patients should not die. I thought I could cure every case. "It was the pride that goes before a fall." One day five cases were admitted from the same family—two others had died at home, these were the remainder of the family: they were among the most malignant cases I have ever seen. The patients were simply fearful to look on, swollen beyond semblance to human countenance, cyanotic to blueness, noses full and bloody, tongues swollen till protruding and a dirty black, throats a dirty leathery black, and the stench from throat and nose sickening, yet I thought I could cure even these. I had the most faithful nurses, but I attended the cases nearly every half-hour myself, and know that everything was done just as I wanted it done. Those cases, too, passed through my hands, but only two of them to the world again, the other three to the grave. It nearly broke my heart, and altogether my faith in any treatment for all cases of diphtheria.

Then at that time, only a few years ago, we were almost in despair; frequently our hopes would be awakened only to be doomed to renewed disappointment. We were at one extreme, we tried everything but could trust absolutely to nothing; now we swing the other way. Time would fail me to describe the discovery, and evolution of the present or antitoxin treatment of diphtheria. All honor to those who are thus spending their lives in useful and laborious, yet often unthanked study and experiment. At first it was received with doubt, and even yet, I am sorry to say, some who should know better, deny its success.

Little over a year ago the physician to the diphtheria wards of the North-western Fever Hospital in London said in answer to my question, "I have no faith in antitoxin. If I know a case is going to end fatally I inject antitoxin in deference to general opinion, and it generally ends fatally. If I think the case is going to get on well, I do not use antitoxin, and the case goes on well without." Fortunately, this is rare. The profession as a whole have received the treatment with open arms, so much so I now wish to sound a note of warning.

Let me digress a moment to say I do not intend this for a discussion on diphtheria in general. I will not even notice the pathology, nor to any extent the symptoms, nor follow out the minute physiological action of antitoxin. I can give you no information in these respects, but you had better get it elsewhere, or perhaps you already know. Enough to say that while a short time ago we were almost struck with terror when called to the bedside of a little patient to find malaise, high temperature, fast pulse, with sore throat, which, on inspection, shows all over an angry, fiery blush, with here and there whitish or greenish grey patches of membrane scattered beyond tonsils, and rapidly coalescing, or it may be more extensive, and completely cover tonsils, fauces and uvula, even extending into posterior nares and larynx, or in other cases to find the larynx alone affected, except by the contiguous inflammation, no membrane visible except by closely looking well down on epiglottis and upper part of larynx, where it may be seen to form a more or less complete ring. The latter are nearly always more severe, and often have a rapidly fatal tendency unless relief is prompt and effective. We had comparatively little idea where the trouble would end, whether we could save that patient or whether all the family had been exposed, especially if any other children; if so, whether we could hope for their escape from an attack, or with their lives should an attack of any severity develop. How often has death claimed more than one victim even out of a single family? Now, what a change! As soon as we see such a case we prepare an antitoxin syringe and give an injection with about as little thought as we would give an ordinary hypodermic injection, expecting nothing else but that the patient will be well in a few days.

It is about this free and easy treatment that I hope to provoke the first discussion, and urge you to make it careful in every way, not satisfied with the use of antitoxin alone.

I scarcely hope to give you any information, but hope to get some myself from the after discussion, as I hope also many others may, who are called on to treat these cases away from hospitals, away from consultants, and away from everything but their own good training, common-sense and judgment.

Let me say that while, as a rule, the antitoxin treatment gives the most brilliant results, for all who have had a chance to observe its action know how many a nasty case is changed in from 24 to 48 or 72 hours from a severe and malignant illness to a condition of comfort and almost beginning convalescence. In fact, we are apt to think cure so easy that we need no longer fear any case. Should this be so, the antitoxin treatment may not prove an unmixed good. I have already seen the beginning of carelessness. Treatment is so convenient, that there is a corresponding temptation to let things go as we once would not have thought of doing. Isolation is a nuisance, and may be neglected as may be precautions about carrying contagion. Cases are over so quickly,

and with so little fear of any unhappy result that at the anxious solicitation of the parent, whose business may be temporarily injured if diphtheria be known to be in his family, there may be a temptation to neglect reporting cases.

Also, we are inclined to neglect other treatment, thinking the antitoxin sufficient. This should not be. Every case should be as carefully isolated, as carefully treated locally and generally, and as promptly reported as if we had no antitoxin. If not, though all may go well for a time, "be sure your sin will find you out." Antitoxin should be most carefully and promptly used, but in spite of this, if you have not yet you certainly may at any time get cases in which it will have little, if any, effect, and the other forms of treatment must alone do good, if good is to be done.

Why is this? Is not antitoxin a specific for diphtheria if used early and properly? Does it not cure those who have the disease, and render those who have not, proof against it, for a time at least? Again, yes. What a paradox: for of a certainty many of the cases which are not benefited are more than cases of simple tonsillitis—they present all the classical symptoms of diphtheria, which I need not enumerate. There are cases of diphtheria not cases of diphtheria. None of these can explain; in fact, there is only one explanation: On bacteriological examination we find these refractory cases due to a partial or whole infection with other, though probably allied, organisms, with cocci and streptococci, and over these antitoxin has no specific power. We do not know when these cases may occur. In ordinary practice, except in hospitals and large cities, bacteriological test is out of the question, and even where it is possible, it is often running an undesirable and unnecessary risk to wait for it. Use antitoxin at once, but use other treatment as faithfully as if you were sure the antitoxin treatment would do no good. General treatment is so varied that I will not specify. Heart tonics, when needed, as strychnia and digitalis; local sprays, as an 8 to 16 per cent. solution of peroxide of hydrogen alone, or with H_8Cl_2, or solution of H_8Cl_2 alone—1 to 4, or even 1 to 2,000.

As to use and dosage of antitoxin, you can find it in many places; I will not worry you again with vain repetition. Give enough and give it early; give more if case is well advanced, and even early in laryngeal cases; 8 to 16,000 units have been given with safety, so 2 to 4,000 is safe enough; repeat as needed. If young children have been unavoidably exposed, it is wise to give injections to render immune; smaller dosage suffices here, and proves effectual from two to three weeks.

I have already kept you longer than I at first expected with my whole paper, so will hurry over the latter part of my subject.

What shall we do in those laryngeal cases which, in spite of antitoxin, go on to stenosis, and urgently require immediate relief if the patients are not to die of suffocation? We have a choice between tracheotomy, old and well tried, and intubation, compara-

tively new, but an operation which has stood the test of several years and is still increasing in popularity, though perhaps hardly yet at the stage where its actual usefulness is absolutely settled. Certainly, for a large number of cases and under favorable circumstances, I would put it before tracheotomy, and would think it unnecessary to mention the latter, but I am seeking altogether the good of the practitioner who has to depend upon himself. His patients are not in hospitals; he has no specialist to operate for or counsel him; perhaps even no nurse who has ever seen a case of diphtheria before, let alone an intubation or tracheotomy. Every practitioner must look forward to these cases. They may occur in the most awkward places, and when they come there is no time to dally—action must be prompt. What can be done? Statistics should be at finger ends, and they undoubtedly favor intubation. But statistics may lie; we must question them closely. I do not mean that they themselves are false, but they give a false impression. Where do these statistics come from? Undoubtedly, from special and hospital practice, the very kind we cannot consider. The cases of general practitioners are so few and far between that we have little record of them, else they might tell a different story. Still another difference, and of equal or greater importance: tracheotomy is bloody; the knife is used; the stomach of the laity cannot stand it. Almost anything before the knife, cutting and blood. To their mind intubation must be infinitely easier, safer and more effective than tracheotomy. The parents will eagerly assent to and even urge intubation, when they would not for a moment consider the other. This means that in the majority of cases intubation is done comparatively early, while tracheotomy is often done *in extremis*, and more in hope of relief than cure. Were it done as early as intubation, the statistics might be reversed.

Again, while intubation has the advantage already noted, it has others: there is no wound to heal, no scar, and when the tube is once settled in place, it is, as a rule, very satisfactory; but as a matter of fact, to the general practitioner who may only need to choose between the two once or twice in a lifetime, or at best in several years, the question of skill—or perhaps I should in this case say dexterity from continued practice—is an important one. Intubation is undeniably difficult at times, even to the expert. How, then, to another? Other objections are that it can seldom be done *in extremis*, and even after trial and failure, and in rarer cases after success, a secondary tracheotomy must be performed to save the patient. The tube once in place, it may be coughed up. This perhaps is rare, but must be considered. In special and hospital practice, with the surgeon within easy call, this can be remedied; not so easily in a small town or the country, where the surgeon may be attending a case twenty miles away at the time, and for that reason cannot be got when he is most wanted.

Again, all are sometimes called on to operate. Tracheotomy is in principle and technique like other operations, so all should be

able to do it with comparative confidence. True, it is often utterly impossible to find the landmarks described so minutely in text-books. In children, even "Adam's apple" may be hard to find. and the fine white line between muscles invisible; but go ahead, work carefully deeper in the middle line, being careful to make large enough incision: work deeper so carefully that even if you miss the middle for a time you will do no harm. Most of the deep dissection can be done by handle of knife, director or forceps, or by nipping up between forceps. When deep enough, the isthmus of thyroid will infallibly appear. It is sufficient guide, we are told, to pull it down. It is often easier and better to divide between forceps, or even tear. There need be no fear of uncontrollable haemorrhage. I have done both without trouble. Before opening trachea transfix with tenaculum or sutures, to facilitate entry of tube and cleaning out of membrane, as well as help in making opening, which should be large enough and from below upward.

Time fails me to go further, but to my mind this is the operation for the ordinary general practitioner.

INFECTION AND SEROTHERAPY.*

BY EDWARD LABERGE, M.D.,

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Fifteen years ago, notwithstanding the labors of Davaine and his successors with regard to the carbuncle, notwithstanding the beautiful studies of Mr. Pasteur on the silk-worms, the question could be asked: Were there really any diseases due to the intervention of microbes? To-day, this is the question that may be asked: Is there truly any disease in which the microbe does not intervene? And thus it is that the role of the microbe extends itself beyond all that we could foresee.—*Duclaux.*

We must not be too exclusive, and cast aside the solid fund of clinical knowledge, accumulated with care during the course of centuries, through the earnest labor and observations of men of merit.

We must also take into account the labors of Schwann and Virchow, who show or point out to us the morbid processes of diseases in their primary seat or location: the organized and living cell.

Clinique gives us the symptomatology, or in other words the doctrine of symptoms. Pathological anatomy shows or points the lesion; and with the aid of bacteriology, we are able to determine or discover the cause of diseases.

All these three must go hand in hand in the study of contagious diseases. They are, so to speak, the complement or the completion

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the one of the other; or in other words, they are the search-lights of medicine.

Cellular pathology has everything to gain in knowing the *prima movens* of the morbid acts, whose seat is the living cell.

To show or point out to humanity that the real cause of the most redoubtable diseases exists, not within humanity itself, but outside of it, is, indeed, to point out the prophylactic, and fortify it against the attack of disease.

To establish deductions which serve as the base of public hygiene, is not the only merit of bacteriology; we are indebted to it for the therapeutic serum, which has already done so much good in the past, and which is so pregnant with promise for the future.

Taking into consideration the progress realized since the discoveries of the immortal Pasteur, it is unjust to advance the accusation that this science is slow, ineffective and sterile.

Mr. Pasteur launched the medical science on the healing paths, on which it walks victoriously to-day. At the present time we are preoccupied in determining the anatomical modifications suffered or sustained by the diseased organism. We have discovered that the development of the microbe is accompanied with detritus, secretions and toxic products, endowed or possessed of a high physiological action. We have furthermore discovered that it is by reason of their toxin that they kill; this toxin may be detached or separated, it may be attenuated or rendered less severe, and we are able to make from it, or of it, the vaccine virus which gives the immunity; that is to say, it serves as a protection against disease.

Gentlemen, in a few words we have told you what bacteriology has done for humanity since its discovery.

The ancients had carefully noted the non-recidivation or relapse of fevers; and this notion or idea served as the base of the old theories of preservation, which never went outside or beyond the limits of empiricism. It is only in these latter years, thanks to bacteriological knowledge, that the light has been thrown on this subject. A pathogenic microbe implants itself in a living organism; in its quality of virus it is developed therein, it borrows from the organism the materials of its nutrition and growth, and gives to it the detritus of its own life.

Why has this process an end? Why does the human organism cease, at a given moment, to constitute a camping-ground favorable to the development of the morbid germ, and acquire a refractory state with regard to the microbe itself?

To give the solution of this problem is to lay the foundations of a doctrine of immunity; for if the organism, which has received an impression or has been affected by infection, has been able to acquire new properties, the immunity observed or noticed sooner or later after the cessation of the microbian disease, is nothing else than the continuation of that particular dynamic state, thanks to which the anatomic elements have acquired the refractory state.

Infection is, so to speak, a contest essentially active and living. There is on the one hand the attack which is made by the microbes, and on the other hand, there is the resistance sustained by all the vital resources of the cell and the organic plasmas. The microbian disease, its form, its future and its consequences, result from the opposition of these two factors and from their relative power. In order that the sure and vaccinal state may be obtained, it is necessary that the organism should gain the superiority over the microbe, that it arrest its multiplication, and that it expel and destroy it. In a word, it is necessary that the organism destroy or reduce to nothing the two means by which the infection impresses or affects the living being, namely, the microbe itself, and the detritus of its life.

Many theories have been put forward to explain the immunity. According to some, it consists in the exhaustion of the medium; that is to say, the destruction in the organism of the substances necessary to the life of the parasite. According to others, it is the production of preventive substances; that is to say, the production of substances which may impregnate the organism, and make it undergo or sustain certain modifications, which render it unfit or incapable of a second infection. Again, others have sought the cause of immunity in the bactericide state of the blood, and from the interstitial plasmas, etc. These are all elements of organic resistance of the highest importance, but it is not that which constitutes the immunity.

For a long time certain scientists had already observed or remarked a leucocytic affluxion towards a point of the organism, when this was wounded by a prick or a sting, for example. The role of these leucocytes appeared to arrest, to repair the morbid processes. It is in consequence of the patient studies of Metchnicoff, that the phagocytose ought to take the first place in the history of organic defence against infection. This savant has demonstrated the grand role which the living cells, and especially the leucocytes play or act in the production of immunity. These elements are all animated to a degree variable by amyboide movements, by whose aid they attain, seize and englobe the bacteria. The destruction then takes place through a veritable digestion, intra-cellular. The protoplasma of the leucocytes secretes a diastase which attacks the bacterian protoplasma, dissolves it, and realizes the disintegration of the englobed microbe. The affinity of the leucocytes for the bacteria reposes on a cellular elective sensibility which increases in the phagocytes, they being victorious as a consequence of the contests. Therefore, it is necessary to seek this apparatus, not alone in the exhaustion of the medium, not alone in the production of preventive substances, but even in the living cell. It is to reinforce and develop this activity of the cells that all the means concur, having for their design the augmentation of the resistance of the organism. This theory of the phagocytose is applied to the generality of facts, and alone furnishes a sufficient explanation of

the principal character of immunity, which is duration. Duration, however, does not constitute the exclusive base of immunity; different factors intervene and reciprocally perfect one another. The penetration of the microbe is effected according to various mechanisms The existence of a solution of continuity, the fall or the nicroses of the epithelial elements, more easily put the germs in contact with the ways or means of absorption. Besides these are sometimes disposed for the penetration of fine solid particles, and thus they favor the introduction of the microbe. There are some germs which pullulate locally, as in diphtheria; and there are others which spread themselves in all the organism, as in septicæmia.

These microbes are disseminated in the organism, either by the lacunæ, which are between the mass of conjunctive tissues, or by the lymphatics, the veinal system, the serous, or even, as in hydrophobia, by the nervous system, in following the course of nervous fibres. The conflict of microbes with the organic cells constitutes the principal anatomic fact, which may be placed to the credit or account of infection. It takes place on the outside of the surfaces or in the extremity of the tissues. These germs penetrate into the interior medium, they are multiplied therein, they borrow from this medium the elements of their nutrition, and they secrete some soluble poisons which infect or poison it. The organism prepares the resistance, and causes to enter upon the scene the apparatus of defence, and if the conflict is not unfavorable to it, it repairs, more or less imperfectly, the disorder caused by the bacteria. Wherever there are living microbes, we find soluble poisons which are their products of secretions, and which are in relation with the vitality and the virulence of the germs which have produced them, and they constitute the principal factor of the gravity of the disease. The bacilli of diphtheria in pure culture develop in the ordinary bouillon a chemical poison, which may be found in the bouillon relieved of every figured element by filtration on porcelain. This poison, injected into tender or sensitive animals, produces after a short incubation a morbid ensemble, quite like to the experimental infection, provoked or caused by the inoculation of virulent cultures. In this infection, moreover, the pullulation of the microbes remains quite local, and the diphtheritic bacilli are not found but exceptionally and transitorily in the profound or deep organs. But on the contrary, the specific poison, abundantly produced in place of inoculation, is spread into the circulation and realizes in the different organs the visceral lesions of diphtheria. This poison has been found in the blood, in the pathological exudations, in the veins, in the viscera, and particularly in the spleen. It is the poison which shows its action on the nervous system, and realizes in experimental facts, as well as in clinical facts, the paralysis so peculiar to diphtheria.

Thus the specific toxin follows everywhere the virulent microbe, it even goes beyond its sphere of action, it generalizes itself, and

it plays or acts in the realization of the microbian disease quite a fundamental role. These microbian secretions are classed among the albuminous bodies.

We may divide or distinguish them into two groups. The first group comprises the specific toxins of the medium of cultures which can reproduce the fundamental characters of the disease, when they are injected into tender or sensitive animals, and they may be destroyed by heat ranging from 60 to 100 degrees. The second group comprises certain substances called proteids; these substances cannot be destroyed by ebullition, and possess characters identical with the different species of microbes, and they act an identical role in chimiotaxis, phagocytosis, and fever. Behring says: "If the poisons do not realize the vaccinal state and the immunity, we cannot disown the grand role that they act in the placing on guard of organic forces, and in the production of these permanent antitoxin properties." We should therefore consider them one of the most important factors of the refractory state. This is confirmed in all the history of chemical vaccinations. When the infection meets an organism feebly disposed, the microbian proliferation and the organic reaction gives place to a local lesion. It is but slowly and by reason of an absorption of the soluble poisons or of a secondary generalization that the entire organism undergoes the effects of the infection.

In human pathology it is only exceptionally that we see the infection take immediately a generalizing character and a septicæmic form, for this supposes a maxima receptivity or massive inoculations. In the great majority of cases the infection makes its first appearance during a period of incubation. It is the preparation of the infectious contest, which only begins after the multiplication of the assailants, or when the germs, at first retained by the humors and the blood, fix themselves and are colonized in repose in some local seat more favorable to their development.

The bacteria thus secrete their toxins which impress the nerves, the vessels, and the phagocytes. Then the disease enters into the period of invasion. The characteristic phenomena of the disease develops itself up to a certain maximum. This is the state period which has begun. It is the phase of equilibrium between the attack and the defence. It is the disease itself. If the organism gains the ascendancy, the neutralization and the elimination of the microbes and toxins take place, the vaccinal state is realized, and the infection enters into the period of regression, which marks the arrest of the contest, the rejection of the assailants, and the reparation of the organic losses; a process which is continued and completed during the convalescence. In the meantime it is just to remark that the elimination of the toxins may be the occasion of slow specious accidents; for example, nephritis. If the contest is in favor of the microbe, all the phenomena augment, the infection is more intense, some secondary infections intervene, and the principal organs of the economy are found interested,

especially those of the defence and the emunctories, as the spleen, the liver and the kidney. Death takes place by asphyx, syncope, adynamy and coma.

The microbian pathology has neglected nothing of the old diagnostic resources; it alone has learned to better interpret and synthetize an ensemble of morbid phenomena realizing the infectious state.

It is especially the notion of the microbe and their demonstration in the infected organism, which represent the veritable conquest of modern infectious nosography. There is the fundamental criterium, the *solus sufficiens* of the microbian disease. Certainly the diagnostic of the microbian diseases should rest or lean upon the clinic and pathological anatomy, but especially on bacteriology, which permits us to class a doubtful case and complete the nosography of an infection, and whose importance, in point of view of the prognostic, is very great in establishing whether it is a question of simple infection or of microbian association. The principle of microbian diseases is outside of us: therefore there are, as Duclaux observes, some evitable or avoidable diseases—that is to say, medical intervention should hope for much from prophylactic. The protection against contagious diseases forms the most considerable chapter of contemporary hygiene.

We have now, gentlemen a treatment truly curative. True it is that it only serves for certain microbian diseases, but everything leads us to hope that before long we will have obtained antitoxins against all the microbian diseases. It is not vain to be hopeful. Have we not discovered and obtained antitoxins against hydrophobia and diphtheria? Why, therefore, should we not discover or obtain them against all the diseases produced by the germs of infection?

Permit me, gentlemen, to complete this task by relating, in a few words, the history of diphtheria, together with the truly marvellous results which have been realized during these latter years through the ministry of treatment with the diphtheritic antitoxins.

Diphtheria is a disease that has been known for a long time. In the second century it was made mention of by an author of that period; in the fifth century some medical writers speak of it; the physicians of the sixteenth and the eighteenth centuries have written concerning it: and finally, in this century Bretonneau and Rousseau have left us their studies on this disease. More recently, Virchow, Rokitansky, Gubler, Peter and other celebrities have advanced theories more or less varied, and many and very varied were the treatments which they recommended; but all are indeed ineffective. It was only in 1883 that the light began to shine on this disease, when Klebs and Loeffler discovered the microbe of diphtheria. Since then we have the memorable labors of Roux and Yercin, during the years 1888-89 and 1890; in every case of diphtheria they separated or detached the microbe, with it they inoculated animals, and this inoculation produced the disease with

all its symptoms: the false membrane, paralysis, etc. These labors, I claim, made a g'ant step in the study of this affection. Besides this, Messrs. Roux and Yercin obtained from the culture of diphtheria a poison with which they determined the same accidents as with the inoculation of the bacilli, and in particular the paralysis. And finally the discovery, made scarcely a few years ago, of a vaccinal serum in the blood of animals immuned against the poison of diphtheria, has transformed the therapeutic history of this terrible disease: it has immortalized the names of Roux and Behring, and it has placed them in the front rank among the benefactors of humanity. I firmly believe that no mother in the whole world to-day should be ignorant of these two names. The therapeutic serum employed or used by physicians, for only some few years, has been rewarded with most brilliant results, and it gives us much to hope for in the future.

Immediately after the dicovery of the bacilli of diphtheria, experiments were made to render animals immune In 1887 Hoffman declared formally that animals inoculated with old cultures do not die, and that they are rendered immune against the virulent cultures with regard to other animals. In 1890 Brieger and Frankel acknowledged the immunity of guinea-pigs, caused by injecting into them from ten to twenty cubic centimetres of a culture, heated at from 65° to 70°. Almost at the same time Behring attenuated some cultures with the trichlorure of iodine, and admitted the immunity of animals caused by this preparation.

On the animal immunized the subcutaneous inoculations with virulent cultures are followed by a production of false membranes, wherein may be found some virulent bacilli, but the accidents of intoxication are not reproduced. This property is due to a substance which destroys the diphtheritic poison, but the nature of the antitoxin is still unknown. Other savants have made experiments *in vitro*. They put in a glass some serum taken from an animal rendered immune; they mix with it a certain quantity of diphtheritic toxin, and this becomes inoffensive. The infection of guinea-pigs or healthy rabbits with this melange vaccinate them against diphtheria.

Moreover, with regard to subjects vaccinated with the living virus or with the toxin, the injection of the serum, if this does not take place too late, prevents the ulterior accidents of intoxication and the animal gets better. Thus the serum of immuned animals possesses the three following properties: it is antiseptic, vaccinal and therapeutic.

A horse is made use of to immunize. The time necessary to bring him to a degree of sufficient immunity is from sixty to eighty days. We begin the experiment by injecting under the skin of the horse either some iodic toxin to the tenth, or some cultures heated to sixty-five degrees, or a very small quantity of pure toxin; and progressively it comes to pass that we have injected into the veins of the horse towards the sixtieth day from two hundred to three

hundred cubic centimetres of pure toxin without having produced any sign of local or general reaction. At this moment the serum appears to have its properties carried to the maximum. It is this serum that we sell and buy in small bottles of ten or twenty cubic centimetres. Mr. Roux is of the opinion that the serum acts as an incitant to the defensive properties of the organism. The proof that he gives in support of his opinion is this: he says that the injection of the serum will be ineffective with regard to animals weakened by anterior microbian inoculations, the cells of the defence being no longer impressionable. The very vivacious cells of young guinea-pigs respond indeed to the stimulation of the serum. With regard to the weak guinea-pig already impressed by the microbian products, the cells remain without influence in the presence of the toxin. Another savant has remarked, in studying the afflux of the leucocytes at the level of the point of inoculation with the diphtheritic cultures, that the injection of the serum prevented the death of the leucocytes among immune animals, which leucocytes were killed by the diphtheritic toxin when the animal had not received the preventive injection. The therapeutic serum therefore favors the phagocytose.

If we consult the statistics of hospitals wherein diphtheria patients are treated with anti-diphtheritic serum, we will find a considerable diminution of figures in the table of mortality as compared with those before the use of the serum. The mortality in the diphtheria ward of the Hospital des Infants Malades at Paris was 51.71 per cent. In 1895 Behring was able to say that in the empire of Germany, thanks to the use of the serum, the mortality from diphtheria was lowered $\frac{3}{4}$ and even $\frac{4}{5}$ per cent. Baginsky, out of 163 cases treated with the antitoxin of Aronson, has a mortality of 14.37 per cent. Moizard, a physician of the hospitals of Paris, out of 231 patients treated in his service with the serum of Roux, has a mortality of 14.7 per cent. Lebreton and Magdelaine give a mortality of 12 per cent. Variod, whose mortality was from 40 to 50 per cent., lowered these figures in 1895 to 14.5 per cent., and in 1896 to 15.27 per cent. Dr. Godet, who stated at Sables d'Olme a mortality of 65 to 70 per cent, obtains twenty-seven cures out of twenty-seven cases. The statistics established by the American Society of Pediatry give a mortality of 12.3 per cent. The Belgian Commission, charged to examine the results of the method of Roux, gave as a report of its labor a mortality of 11 per cent.

During the three years that I have had the honor to be the physician of the Civic Hospital of the city of Montreal, I have received 571 patients stricken with diphtheria. The bacteriological examination confirmed the diagnosis in each case. All these patients have been treated with antitoxin injections of the serum of Roux, prepared at the Pasteur Institute of Paris. Of these 571 patients, 77 died, and of these 77 cases, 31 died before they had been in the hospital twenty-four hours. This gives us a percentage of 13.5 per cent. If we subtract the thirty-one patients who died before they

had been in the hospital twenty-four hours, and who, as a consequence, could not have received the full benefit of our treatment, the mortality is reduced to 8 per cent. and a fraction.

Gentlemen, but ten years ago we were very far from foreseeing such a result in the treatment of diphtheria, especially among the children of a large city, which for the most part are possessed of weak and feeble constitutions.

What bacteriology has given us to fight diphtheria in the past, leads us to believe that we will obtain in the near future that which is necessary to combat all other infectious diseases.

THERAPEUTIC SUGGESTIONS FOR CHILDREN.*

BY LOUIS FISCHER, M.D.,

Professor of Diseases in Children in the New York School of Clinical Medicine, Attending Physician to the Children's Department of the German Poliklinik, and to the German West Side Dispensary, and to the Messiah Home for Children, Consulting Physician to the Un. Heb. Char., etc., etc.

In the management of infantile disease we are apt to regard the treatment from the standpoint of drugs, and frequently some of the most vital and important therapeutic measures are overlooked. My intention, therefore, is to devote the time allotted to me to the consideration of those diseases which cause alarming symptoms and require immediate and sometimes heroic treatment. The first of these I should like to consider is Convulsions. In the treatment of this so frequent symptom, we always aim to seek the cause of the convulsion and seek to remedy the same by removing the cause if possible. Thus, a history of an overloaded stomach, with a consequent high fever and ptomaine poisoning, and the absorption of this poison-causing toxæmia, will call for, first, cleansing of the stomach with lavage, using a normal saline solution—cleaning as much as possible therefore with warm salt water until the gastric contents have been removed. Meanwhile, a strong mustard foot-bath can be used to relieve the cerebral hyperæmia, and, if necessary, a leech can be applied behind each ear over the mastoid process of the temporal bone.

Leeching can also be accomplished by applying one leech to the alæ nasi, and thus relieve some of the cerebral congestion through the frontal sinus. A case of this kind I have just reported *in extenso*—and will be published in *Pediatrics*—in which a child four years old suffered with convulsions which constantly recurred at intervals of fifteen and thirty minutes, the attacks extending over a period of three to four days. In this case, although very large doses of bromide of potash and chloral hydrate were administered, no relief was obtainable until after the application of two leeches, one behind each ear.

* Read by invitation before the Eastern Medical Society of New York City.

Having mentioned the value of flushing the stomach and thus removing quickly all fermentative products, permit me to call your attention to the value of flushing the colon. This can be accomplished by an ordinary fountain syringe, to which is attached a soft flexible catheter, by gradually pushing it through the anus; first flushing the rectum, and directly pushing it through the sphincters into the colon, in all from six to eight inches, and using for this procedure from one to two quarts of warm salt water, and flushing the parts until the water returns clean. We very well know that the rectum absorbs, and therefore when the system has been de-hydrated by a long, lasting attack of diarrhœa not only can we serve the body by adding to its volume of blood by this means, but at the same time wash away the products of putrefaction and fermentation, and quite remove thereby some irritation.

This same procedure should be used when resorting to rectal feeding, so that we first cleanse the parts, and after a few moments slowly inject the nutrient enema. A point worth noting in this connection is that the rectum absorbs but does not digest.

Another therapeutic measure which is not as commonly used as it deserves is hypodermoclysis. This has been of great service to me, more especially during the last summer, in cases of extreme exhaustion, following long-continued attacks of diarrhœa, in which the blood is de-hydrated and almost thickened. In one instance, a child eight months old, suffering with a severe attack of enterocolitis, was put on a rigid form of diet, and as there was at times persistent attacks of vomiting, the stomach was put at rest by ordering a discontinuance of feeding per mouth, and rectal feeding was resorted to. The child's condition, however, was so grave, the body so emaciated, the extremities so cold, in fact, the exhaustion so marked, the pulse small and thready, that we resorted to friction, hot bottles of water to the feet, and to the hypodermic injection of one pint of the normal saline solution at a temperature of 105 degrees. To accomplish this, I took a glass irrigator, which was armed by a long hypodermic needle, and injected it into the connective tissue of the abdomen. It was surprising to note the rapidity with which the pulse responded, and also the effect on the general circulation. The child was so much brighter after this procedure that I ordered another saline injection six hours later, and thus we gave an injection of this kind every six hours the first day, and every twelve hours on the second day. In addition to careful dieting, hygienic treatment and proper medication, the child made a good recovery.

Before dismissing the question of rectal flushing permit me to add my testimony to its value in the management of constipation. In fact, an invariable rule followed by me in children is to never permit a child to retire for the night without a movement of its bowels; consequently, if the infant has been constipated during the day I advise the injection of one pint of a mixture consisting of two-thirds warm water and one-third glycerine—the latter to be used to soften hardened accumulations of fæces in the rectum.

Another alarming symptom to which I wish to direct your attention is Anuria. This disagreeable and most distressing symptom in children can frequently be combated by a most simple procedure. First of all, we can stimulate the action of the kidneys, and also at the same time the bladder, by immersing the child in very warm water, at a temperature of 105 to 110, by raising and lowering it and continuing the bath for about one minute. It is advisable to notice—and this must be done very carefully—to be sure that the child does not pass its water while in the bath. No doubt, most of you, fellow-practitioners, can second the opinion expressed by me. If, however, the immersion into hot water is not successful, then I invariably advise applying dry-cups over the lumbar region (two on each side will suffice), to be applied for three minutes at a time, and renewed if necessary in an hour, but choosing different parts of the body for their application. A case of this kind I recently saw, in consultation with Dr. Ghertler and Dr. Musgrave of this city, in a child three years old suffering from diphtheria, complicated by diphtheritic nephritis. The child had not passed its water in almost twenty hours, and the application of two dry-cups by the trained nurse in charge gave immediate relief. Dr. Ghertler reported to me that eight ounces of urine were voided immediately after this procedure.

Another symptom which is very distressing in children is Dyspnœa, and when it is caused by intense pulmonary congestion I know of no better remedy than first applying six dry-cups over the front and back of the thorax, which will sometimes afford almost instantaneous relief. The same result can also be obtained by the application of a sinapism to the front and back of the chest. Let me caution you, however, not to apply the sinapism to both sides of the chest at the same time lest the poor baby will be so raw and uncomfortable that it will be compelled to sleep on its sides, so that a good plan is to apply it one day on the front, and, if necessary the following day, to the back of the chest. It is different, however, when applying warm flaxseed poultices. These, I believe, will better serve their purpose when the whole chest is enveloped therein and covered with a strip of oiled muslin to retain the heat, and at the same time prevent the baby from being exposed too much during the changing of the poultices.

Hot turpentine stupe, made by wringing a piece of flannel almost dry, after immersing it in hot water and putting about a teaspoonful of the ordinary spirits of turpentine on to this hot moist flannel, is a very serviceable application in children suffering with abdominal pains, especially in those cases where the pain can be traced to flatulence. A hot cup of tea, peppermint tea, with equal parts of fennel or anise seed tea, and a hot poultice of turpentine applied over the abdomen, will relieve an attack of colic, following fermentative gastritis very rapidly.

Massage—gentle friction of the abdomen with vaseline or lukewarm sweet oil night and morning for several minutes is one of

the best remedies for stimulating peristalsis in the ordinary forms of atonic dyspepsia, an atony of the intestinal canal, that I know of. We can frequently modify long standing constipation by this form of gentle procedure, without the aid of drugs, if we will only persist in the application thereof.

I do not wish to be misunderstood to speak disparagingly of the fluid extract of cascara sagrada or of the value of nux vomica in the management of this disease, but my desire was to direct your attention to a few suggestions, without the aid of drugs in children.

In speaking of anuria, I did not mention the use of the catheter which we are so familiar with. The ice bag over the anterior fontanelle or over the nape of the neck, or the spinal ice bag, has its proper indications and should be resorted to very frequently in that class of cases requiring antithermic remedies. The safest antipyretic measure is certainly the cold pack in children. This can be best applied by means of a sheet wrung out in cold water and applied over half of the body, or we can take a towel, wring it out in cold water, and thus envelop the chest and the abdomen therein, and renew this application every fifteen or thirty minutes, as the urgency of the case may demand in the treatment of hyperpyrexia. Nothing will reduce the temperature as quick as cold water thus applied without producing any deleterious effect on the action of the heart. But to give this cold pack regularly may not sufficiently reduce the temperature; then the safest method is to immerse the child in a tub of water at the temperature of 90° F., and by adding cold water or a cake of ice, gradually lower the temperature of the bath until the water reaches 75° F. The duration of the bath should be from two to five minutes The baby must be rubbed constantly while in the bath to stimulate the circulation of the blood, and, at the same time, prevent chilling usually noted by cyanosis, blue lips and finger-nails.

There is no drug (none excepted) that is known as an antipyretic that is safe in children. They are all cardiac depressants, and when given require either musk or camphor to counteract their depressing effect; therefore they are dangerous. On January 28, 1893, I was invited to read a paper before the New York Post-Graduate Clinical Society on "The Management of High Fever in Children," and the most vital point was the one which was concurred in by most of the speakers, namely: That the cold tar derivatives are, one and all, heart depressants, and therefore more or less dangerous.

Pulmonary Gymnastics.

This child is about twelve years old, and has been under my treatment for the last five years. She was first brought to me suffering with epistaxis. This recurred at various times, and with it the child complained of general malaise. Her appetite was diminished; her bowels did not act properly; she had frequent chills and fever, and did not seem to gain in weight. A careful

physical examination of her lungs revealed nothing abnormal. In fact, the symptoms pointed to a distinct malarial infection. There was no cough, no expectoration, and no symptom pointing to any pulmonary disease. An examination of her blood for the presence of the plasmodia malaria was negative. The spleen was normal in size. The heart sounds were muffled, but there was no murmur. There was a loud blowing murmur to be heard in the carotids, and also a distinct venous hum was heard in the neck. As the latter were so-called hæmic murmurs, they were regarded as distinctly anæmic.

The child was ordered careful hygienic treatment, consisting of proper ventilation, exercise and slow, deep inspiration fol owed by slow expiration, so that the lung tissue would be properly expanded. This was ordered to be carried out three times a day, one hour each time. This so-called pulmonary gymnastics seemed to benefit the patient very much. In addition to this, she was put on a strong concentrated liquid diet, consisting chiefly of milk, meat and eggs, and cod liver oil was ordered internally. The child received three drops of creosote three times a day. When I found that her weight was not increasing, and that she had a dry cough, with no expectoration, I suspected the possibility of a latent form of tuberculosis, and thus it was that after several months of careful observation, she suddenly had a large amount of expectoration, which, on careful examination showed tubercle bacilli Thus the diagnosis of pre-tubercular anæmia, or possibly latent tuberculosis, is justifiable.

The main symptom to which I wish to direct your attention is the epistaxis, which occurred early in the disease and a careful examination of the nose did not show any pathological condition, *i.e.*, polypi or otherwise. She is now, as you notice, in a fairly nourished condition, eats well, sleeps well, coughs but very little; her expectoration does not show tubercle bacilli during the last year, and thus I feel that we can class this patient amongst those cured of tuberculosis. I feel that with proper treatment, good, careful attention to diet, she will be absolutely well. Her functions seem to be normal, for she has now commenced to menstruate.

If I have succeeded in directing your attention this evening to some additional mechanical remedies, in addition to drug treatment, then my object has been very well attained.

187 Second Avenue.

ECTOPIC GESTATION—ABDOMINAL PREGNANCY.

BY HARRY E. VAUX, M.D., BROCKVILLE.

On October 11th, at the Brockville General Hospital, assisted by Drs. Cornell and Bowie, I operated on Mrs. B., aged 43, and removed from the abdominal cavity a lithopædion, fourteen years

after a false labor. A few notes on the history of the case may not be without interest.

Mrs. B. expected to be confined in August, 1884. During the earlier months of her pregnancy she had occasional hæmorrhages, but they were not at all profuse and lasted but a short time. During the latter months she suffered excruciating pain whenever the child moved, and was obliged to take morphine freely. There was no pain when the child was quiet. At the time of her expected delivery all motion, and consequently all pain, ceased. Menstruation was re-established, and she was able to attend to her household duties, together with the care of a dairy.

Last year she consulted me, chiefly for the relief of hallucinations and other evidences of mental disturbance. I advised her to

submit to an operation for the removal of the fœtus; but it was not until this autumn that she consented. On account of the exceeding thinness of the abdominal wall, the position of the child was readily mapped out.

At the operation, an incision twelve centimetres long was made a little to the left of the median line. The fœtus was lying with its back to the abdominal wall and its face buried in the right hypochondrium. It was contained in a pseudo-membranous sac, which was intimately attached to all the surrounding viscera, and had vascular connection by means of large vessels with the omentum. The lower part of the sac, enclosing what was the placenta, was so firmly imbedded amongst and adherent to the

pelvic organs that it was impossible to remove it. The sac was cut off a little above the lower angle of the abdominal incision, and the upper portion, tightly encircling the fœtus, was carefully separated from its adhesions and with considerable difficulty, on account of the small abdominal incision, removed. The abdominal cavity was partly filled with a normal salt solution, which was allowed to remain and proved a most excellent restorative. The mouth of the portion of sac which was not removed, was carefully sutured to the lower angle of the wound and secured by knitting needles passed through its substance. The placental tissue resembled yellow tow and was very friable. Patient's temperature never rose higher than 100°, and her recovery was, to use a stock phrase, "uneventful." With the removal of the fœtus all hallucinations vanished, and in a few days she expects to leave the hospital.

I would like to call attention to the fact that in this case there was no history of rupture, and the probability is that this was a case not of ruptured tubal, but of abdominal pregnancy.

GENITO-URINARY INSTRUMENTS REQUIRED BY THE GENERAL PRACTITIONER.*

BY FERD. C. VALENTINE, M.D.,

Professor of Genito-Urinary Diseases, New York School of Clinical Medicine; Genito-Urinary Surgeon, West Side German Dispensary; Genito-Urinary Consultant, United Hebrew Charities, etc., etc.

TWENTY-FIVE or thirty years ago, when most of us were in the happy condition of undergraduates, our teachers disposed of gonorrhœa, if at all, very briefly. Many classed it as dermatologists once classed skin diseases, "which arsenic will cure, which arsenic will not cure, and which the devil himself can't cure."

Fortunately the time of balsams, diuretics, hand-injections and similar shot-gun treatment has passed. To-day we understand that gonorrhœa is a serious disease, and we strive to approach the threshold of its scientific comprehension. From Ricord to Neisser is a great step in the right direction. Their names mark milestones on the path. It sounds pathetic to repeat the former's plaint: "*Si je dois un jour aller en enfer, je sais bien le supplice qui m'y attend, c'est de me voir entouré de blennorrhéens m'obsédant de leurs lamentations, de leurs instances pour obtenir la guérison.*"

Neisser's discovery in 1871 brought a turn in the pathological course. Ricord's heavy supper, a bottle of champagne and night spent with a blonde, yielded to the gonococcus as the etiological factor of nine-tenths of the suffering to which humanity is exposed.

* Presented before the thirty-first Annual Convention of the Canadian Medical Association at Quebec, August 17th, 1898

The cause now known, the treatment has become more rational by scientists, such as I have the honor of addressing to-day.

But there remains the omnipresent prescribing druggist, the quack, the nostrum vendor, all of whom "positively cure clap in three days or less." They know nothing of, and care less for, scientific considerations; they swell that great army whose genito-urinary apparatus becomes a source of physical and mental suffering that finds its end too often only in death. But a small minority of these cases can reach the specialist's hands; small as that minority is, it keeps most specialists very busy.

Many of our most modest brethren in the all-important specialty of general practice hesitate regarding the treatment of genito-urinary diseases. They see the glittering array of instruments in the andrologist's office, and while they doubt their own skill, they shun the expense of acquiring what seems necessary for the successful diagnosis and treatment of genito-urinary diseases.

It is this hesitancy that I unqualifiedly condemn. But for it, many a case now resting under the sward, or condemned to valetudinarianism, might be well and happy to-day.

The special skill in the use of, and the expense of acquiring such instruments are not beyond the general practitioner, as I hope to show.

Without *the microscope* no physician to-day would attempt a diagnosis. This is evident, beyond discussion, when the character of a urethral discharge requires decision. All now know the pathological import of the gonococcus; all should know that when anuclear epithelium is found in the centrifugued urine, it indicates the beginning of stricture. But not all—indeed comparatively few—general practitioners have the time to make daily microscopic examinations of each urethral discharge. For the benefit of their patients and in the interest of scientific study, microscopical laboratories exist everywhere; every town has at least one microscopist, ever ready to do this work. Without it, the practitioner is like a mariner without a compass, an astronomer without a telescope. Such a learned body as this requires no adjuration regarding so self-evident a scientific need.

The Centrifugue. The large number of centrifugues advertised gives the practitioner an *embarras de choix.* The simplest of all is Wossidlo's centrifugue, which requires less space than any other, can be readily put aside when not in use, and when revolving, communicates no vibration; therefore it can do its work on the microscope table without disturbing the employment of this instrument of precision.

The value of the centrifugue for diagnostic purposes need not be discussed here, except to refer to what seems to me is not brought out conspicuously enough in writings on the subject in connection with genito-urinary work. Too frequently a case of gonorrhœa is dismissed when all pain and discharge have disappeared, when the urine, even the first passed in the morning, is free from the slightest granules.

A centrifugued specimen of the urine, at this time, may reveal the presence of thinned urethral epithelium, in which the nucleus is faint instead of distinct, smooth instead of granular, or the nucleus may be entirely absent. If such a patient is not at once treated by the passage of large, heavy sounds or dilators, he will sooner or later show the evidences of stricture.

The fingers. These instruments are perhaps the most important of the armamentarium for genito-urinary work. Even if the efforts of the general practitioner were limited to the treatment of gonorrhœa alone, he would be derelict if he did not educate his fingers, *inter alia*, to the differentiation of the diseases that are diagnosable through the rectum. So, a case in which even the urine is proven to carry no evidence of urethral impairment, the prostate and nominal vesicles may harbor gonococci. In another paper* an effort is made to detail the method employed for their detection in these adnexa Roughly it may be outlined, as repeated expression of the prostate and stripping the seminal vesicles. The product of such manœuvres is examined microscopically, for decision whether the patient may be dismissed as cured of residual gonorrhœa in at least the organs which so often maintain the disease.

The other uses of the fingers in determining this all-important question are detailed elsewhere.†

The two-glass test. Sir Henry Thompson suggested having the patient urinate into two glasses, as a rough office test for the determination of the location of disease. Thus, if the first urine so passed is turbid and the second clear, it would indicate that the turbidity is due to anterior urethritis. If both specimens are turbid, involvement of the posterior urethra, the bladder, the ureters or kidneys would be deduced. This matter is too extensive for elaboration in a paper merely on instruments. Suffice it to say that for current office use the two-glass test is valuable. But it does not suffice for the positive establishment of a differential diagnosis. There can be, for instance, so copious a secretion in the posterior urethra, while the anterior is healthy, as to render the first urine emitted quite turbid, and the then following clear urine from the bladder may cause this condition to simulate anterior urethritis; similarly, the secretion in a posterior urethritis may be so slight and tenacious that the urinary stream does not suffice to detach it. So we have both specimens clear, while the posterior urethra is diseased.

But, for reasons elsewhere detailed, the two-glass test should not be omitted. I have thought well to substitute a twelve-inch ignition tube for glasses in making this test. They are more convenient and cleanly than glasses, and present greater facility for such chemical and microscopic examination as are desirable in

* Valentine, "Recurrent Gonorrhœa," *Atlanta Medical and Surgical Journal*, September, 1898.

† Valentine, "The Proofs of Cure in Gonorrhœa," *Clinical Recorder*, April, 1898.

using separate specimens. Moreover, the smaller but equal columns of urine in the tubes are better than those in glasses for macroscopic examination and comparison.

The soft bougie-á-boule. In many cases presenting indubitable evidence of stricture, a large-sized metal sound will readily glide through the urethra, revealing no obstruction whatever, even to the best educated tact. A soft bougie-á-boule, with a sharp shoulder at the neck, even if several sizes smaller than the metal sound, will catch as it is drawn out of the urethra, and reveal not only the

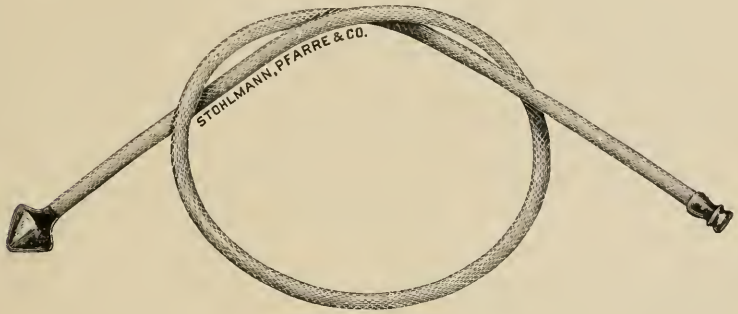

Fig. 1—Soft bougie-á-boule.

location, but also the breadth and character of the stricture. This evidences the impossibility, in the majority of cases, of diagnosing a stricture without this little instrument. The more it is used the more the surgeon is pleased with its softness, which he seeks to enhance by immersing it before use in hot water, until it is as supple as a bit of string.

Sounds. A very large chapter might well be written upon the conditions that demand the various kinds of sounds. Indeed, the busy specialist finds scarcely a week goes by without his being

Fig. 2—Conical hard rubber sound.

obliged to use at least once each shape of sounds to which the names of various authors are attached. In the more modern genito-urinary practice these have largely been substituted by dilators, which, however, are rather too expensive for the average general practitioner. They are described in another paper.*

The general practitioner, who must ever treat the largest number of chronic urethrites, strictures and other urethral disturbances can meet the majority by the conical hard rubber sound.

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* Valentine, "Chronic Urethritis—Its Scientific Treatment," *Clinical Recorder*, January, 1898.

Hard rubber sounds. The most convenient of these has a slight olivary enlargement of the tip, towards which the shaft of the sound is somewhat more supple than its stem. In the beginning of treatment, when there is likely to be considerable urethral hyperæsthesia, or even only normal sensitiveness, the rubber sounds should be given preference. I desire here to again lay stress upon the fact that the office of sounds *never* is to produce forcible dilatation of the urethra. Their only purpose is, as the grand master of genito-urinary work, Professor Guyon, says, to exercise a dynamic influence. Therefore no sound should ever be used larger than one that will readily slip through the urethra. The promptness with which even heavy contractures will yield to the mere presence of a sound is sometimes astonishing. I have in mind a large number of cases, in which the patient could with the greatest effort expel but a few drops of urine: they were strictured so that but a filiform

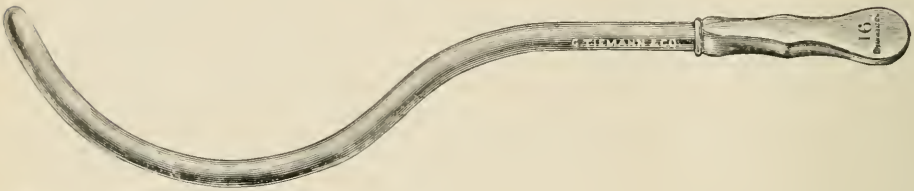


Fig. 3—Béniqué sound.

Fig. 4—Guyon sound.

would pass. It is nothing extraordinary to see such urethras readily transmit a 19 or 20 F. within ten to twelve days, without once employing the slightest force.

Metal sounds. Usually when the urethra will comfortably hold a 24 F. rubber sound, it will not be disturbed by the passage of a 23 metal sound. The shape of the sound then comes into consideration. For general purposes the old Béniqué sound is the most serviceable. Its shape is likely to appal those accustomed to the straighter shapes. But a little anatomical consideration will recall that the urethral curves, especially in the fixed portion, are much stretched by the straight sounds, and in a practical sense both physicians who use the Béniqué sounds and their patients prefer them. By gentle handling they are more safely and easily introduced than others in the majority of cases.

A modification of this instrument is the Guyon sound. Professor Guyon, with the modesty that characterizes greatness, persists in calling his modification by Béniqué's name.

The curve of this sound is about one-half of that of Bénique's instrument. In many cases it proves easier of introduction than the larger curved instrument of the same shape. It will be found convenient to have a screw-thread in its tip, for the attachment of a filiform guide-sound. The instrument is then used as a Le Fort sound. To prevent confusion we may note here that this bears no resemblance to Fort's linear electrolyzer, either in appearance or design.

The usefulness of the soft filiform as a guide for the metal sound through small strictures is self-evident. Its occasional value in large-calibre strictures requires recollection of urethro-spasm, which sometimes is so severe as to prevent the introduction of an instrument that would easily pass the stricture. Cases are not extremely rare which will check the progress of a sound entirely: after the filiform has been gently insinuated into the bladder the large sound, even a 36, readily follows, and can be left to exercise that dynamic influence alluded to before.

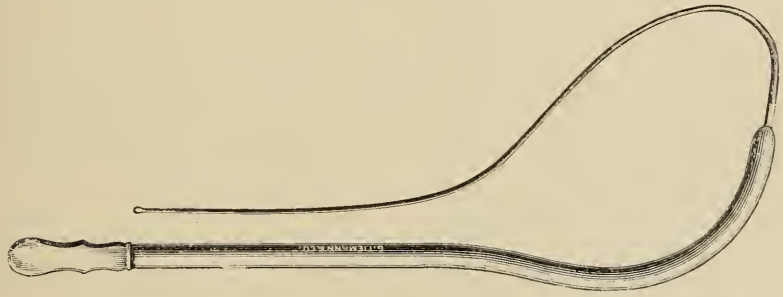


Fig. 5—Le Fort sound, consisting of a Guyon sound with filiform guide attached.

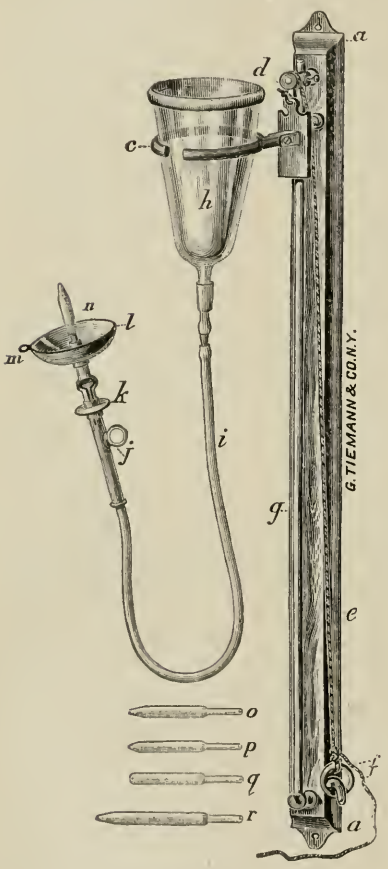
The irrigator. Elsewhere an endeavor is made to fully detail the use of copious irrigations in the treatment of gonorrhœa.* It therefore remains to me here only to show the apparatus. The technique of its employment is as self-evident, as the results obtained are satisfactory. I would not have this understood, however, as anything but a decided advocacy of irrigations, which have done so much to wrest the treatment of gonorrhœa from the bonds of empiricism. In the past, physicians were loath to employ irrigations, because of the complicated and expensive machinery then deemed necessary, and the inevitable uncleanliness with which it was associated.

The cheap little apparatus which I have the honor of presenting evolved itself from five years' persistent study of the objections. With it, at less than one-fifth the price of the Janet irrigator, the operator can grade the pressure for any depth of the urethra and for the bladder, by the right thumb and index finger resting upon

* Valentine, "The Irrigation Treatment of Clap," *International Journal of Surgery*, September, 1898.

the flange of the stop-cock. This, the essential part of the apparatus, also catches the fluid as it spurts from the meatus, and directs it into the basin held by the patient. Consequently, nothing is soiled, even when a very strong solution of potassic permanganate is used.

But it is not in gonorrhœa alone that the irrigations prove useful. Since I employed them, now over five years, after every



aa. Board to be attached to wall, the top to be nine feet from the floor.
b. Sliding cord to which hoisting cord is attached.
c. Collar to hold percolator.
d. Pulley over which cord passes.
e. Hoisting cord.
f. Ring attached to cord for holding filled percolator in place.
g. Basswood upon which block slides.
h. Percolator of 1000 c. cgr. capacity.
i. Rubber tube.
j. Ring of Valentine stop-cock.
k. Flange to control force of flow.
l. Shield to direct flow from urethra into basin held by patient.
m. Ring to suspend stop-cock.
n. Glass nozzle attached.
o. Sharp nozzle for average meatus.
p. Dome-shaped nozzle for very large meatus.
q. Flat nozzle for very small meatus.
r. Triple length sharp nozzle for female meatus.

Fig. 6—Valentine's Urethral and Intravesical Irrigator.

instrumentation of the urethra or bladder, I have not a single case of catheter-fever to record. That I am not alone in this requires but a glance at modern genito-urinary literature to prove.

The Catheter. Large volumes have been written and many more will be, on the choice of catheters. I ask the liberty of saying but a few words on their shape and material.

It is surprising that in America so much difficulty is encoun-

tered in obtaining catheters (1) whose dead end is filled, gradually sloping into the eye; (2) the margin of whose eye is not sharp; (3) whose distal end is funnelled. No discussion is required to show that an open dead-eye cannot be other, despite all attempts

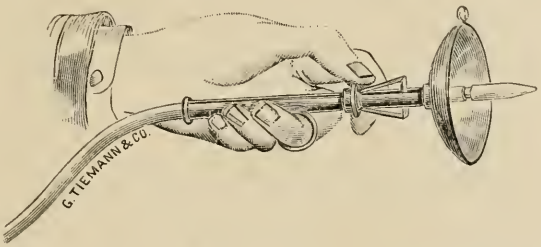


Fig. 7—Valentine Stopcock. Pressing forward the flange, reduces and stops the flow.

Note—Through an error in the drawing the middle finger appears passed through the ring, which is intended for the fourth finger.

at asepsis, than a breeding-spot for bacteria with all the dangers they portend to vesical and systemic infection.

Sharp margins of the eye are all too ready to lacerate the urethra. Therefore no catheter should be used, if the eye passed over the operator's lip, conveys any sensation of even slight roughness.

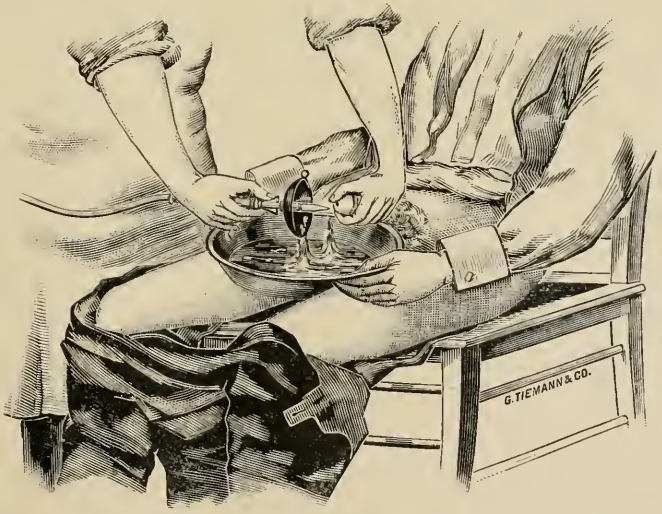


Fig. 8—Anterior irrigation; first step: washing the meatus.

The funnel at the distal end of the catheter makes bladder-washing much easier than if the instrument were of one calibre throughout.

The catheter for ordinary use, should, moreover, be of the softest kind of soft rubber, so that even when used by inexperienced

hands it can do no harm.* This softness; however, becomes an objection when we have to deal with an enlarged prostate. Then the Mercier catheter, half-hard, is required. Four curves are given the beak of this instrument: these curves will suffice to overcome the overwhelming majority of prostatic retentions and enable the practitioner to directly treat the bladder for its consequent infection It is also the most convenient form for the *sonde-á-demeure*, so often necessary in cystitis with, or consequent upon, prostatic enlargement.

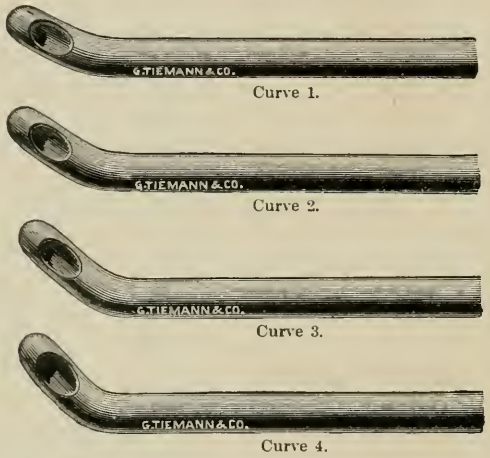


FIG. 9—Mercier catheter

I have endeavored, in this brief sketch, to merely outline the most frequently used instruments, without which the general practitioner cannot avert those persistent and oftentimes dangerous sequelæ and complications that need never reach the specialist in genito-urinary diseases.

I appreciate that throughout I have been "carrying coals to Newcastle," and that your patience and indulgent attention are but part of Canadian courtesy.

242 West 43rd Street, New York.

WE are pleased to learn that our esteemed collaborateur, Dr. Thos. H. Manley, of New York, who has had charge of our department of Surgical Pathology ever since the inception of the JOURNAL, and whose contributions have been so much valued, has been reappointed Visiting Surgeon to Harlem Hospital.

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* Valentine, "The Largest Catheter Always," *Medical Record*, August 3rd, 1895.

Selected Articles.

PROTONUCLEIN IN GENERAL PRACTICE.

Dr. G. W. Sherman, Detroit, Michigan, in reading a paper on "Protonuclein in General Practice," before the Detroit Medical and Library Association recently said: My first practical experience with protonuclein was on myself. About two and a half years ago I was taken with a severe attack of acute catarrhal inflammation of the nasal mucous membrane which rapidly extended down the trachea into the bronchi. It began on a Friday morning with an almost incessant sneezing accompanied by blocking of the nose, fulness in the head and headache, followed later in the day by a thin copious discharge from the nose and an irritating cough. By 5 o'clock p.m. the same day my headache was severe, my limbs all ached, and on taking my temperature it registered 101°. I had had similar attacks before, none apparently quite so severe, which always ran a course of from one to three weeks. I had tried quinine and other remedies without any appreciable benefit, and was a willing subject to try something new. I had a few samples of protonuclein, and began to take them *ad libitum*, starting about 5 o'clock in the evening. By Saturday morning I felt some better and continued taking the preparation through all that day, still *ad libitum*, and by evening, twenty-four hours after I began its use, felt considerably improved I continued taking more during Sunday, when my nose cleared up, and the headache, fever, cough and soreness in my limbs disappeared. By Monday evening after three days' treatment, I was practically well and attended a meeting of the Detroit Medical and Library Association. Since then I have always prescribed protonuclein in these acute catarrhal affections with the same happy results. Experience has taught me that the proper dose for such cases, in the adult, is from six to twelve grains repeated every two to three hours. The treatment should be continued with smaller doses for a few days after the disease has disappeared to prevent a relapse.

I have found protonuclein especially useful in the treatment of broncho-pneumonia in infants and children. In these cases I usually give from two to four grains, according to age, repeated every two to three hours, and find that a recovery takes place in from three to five days. I have had remarkable success in treating pneumonia with this preparation and will briefly report cases.

Case 1.—My mother, aged seventy-two years on April 8, 1897, suffered a severe chill about 9 o'clock in the evening. Two hours later when I first saw her she complained of pain in the right side; was

coughing up bloody mucus, and was very uneasy. Her heart had been irregular for some years but now the pulse was 130 and her temperature 103°. Physical examination revealed pneumonia in the right lung. I prescribed two grains of phenacetin and six grains of protonuclein to be repeated every two hours. By 10 o'clock the next day her temperature was 99 3-5° and her pulse 108; the pain in her side was less and she felt much better. The phenacetin was discontinued and the protonuclein continued. By the third day her temperature was normal and she felt so well that in spite of my protests, she was determined to sit up. She coughed up rust-colored sputum for six or seven days, but otherwise felt quite well. She has had no trouble with her lungs since.

Case 2.—C. G., a male aged sixty-three years, had not felt well for several days, and was taken with a fever the day before I saw him. Patient complained of pain in his right side and difficulty in breathing. His temperature was 102 3-5°, pulse 110, and the lower portion of his left lung was inflamed. I prescribed six grains of protonuclein and ordered the dose to be repeated every two hours. The next day there was hepatization of the lower half of the right lung, with a temperature of 102°, and a pulse of 108. The protonuclein was now increased to nine grains, repeated every two hours. The third day the temperature was 101° and the pulse 100. He felt better and on examination the lung was found to be clearing up. The protonuclein was continued. On the fourth day the temperature was 98°, and the pulse 84, patient had enjoyed a night's rest, appetite returning and lung much improved. The fifth day I found my patient dressed and sitting in a chair. He said he felt well, but I persuaded him to go back to bed, fearing something might happen. I continued the protonuclein four times a day for a few days, when he made a complete recovery.

I have treated ten cases of typhoid fever with protonuclein, all of which made an unusually early recovery considering the severity of the early symptoms of some cases. I will briefly report a few cases:

I was called to a family in which one of the city physicians had charge of two typhoid fever cases; one, aged twenty years, who had been sick three weeks, and another, aged six years, who was just convalescing after seven weeks' il ness. By the time I made my second call, a few days later, two other children of the family had taken sick. A boy seven years of age had not been feeling well for a few days, had no appetite, felt tired, tongue dry and coated, temperature 101°. I gave him four grains of protonuclein every three hours. He began to feel better in a few days, and by the eighth day had entirely recovered. I will leave the members to decide whether this was typhoid fever or not. The other case was a girl aged ten years. She had the usual symptoms of typhoid fever with a temperature of 102½°. Protonuclein six grains, and phenacetin two grains, repeated every three hours, were prescribed. The temperature continued to rise until the fifth day when it reached 104 1-5°, pulse 130. The phenacetin was discontinued and

the cold pack substituted (which was poorly dispensed) and protonuclein increased to nine grains, repeated every two hours. The temperature from the fifth to the tenth day ranged between 102½° and 104½°, and considerable diarrhœa set in which was controlled with bismuth and turpentine emulsion. From the tenth day the temperature gradually declined until the fifteenth day, when it became normal and remained so thereafter. It will be noticed that larger doses of protonuclein were used in this case than in the first case, and a more decisive recovery ensued.

I have recently treated two other patients, one aged six years and the other twelve years, both girls, with large doses of protonuclein, in whom the fever ran a course almost identical with the above case. The one unusual feature in these three cases was the early appearance of the appetite. About the twelfth or thirteenth day they began to ask for food, and in a few days the desire to take nourishment became so keen that it was difficult to refuse them something more substantial than milk. All these cases lost their hair during convalescence.

Protonuclein has a wonderful effect in maintaining the spirits and vitality of a patient during fever and has no depressing effect, while it reduces the temperature. This is particularly noticeable in typhoid cases. They do not lapse into that stupid condition which is so characteristic of this disease.

When protonuclein is taken in large doses, say, ten to fifteen grains, repeated every two or three hours, it produces a deafness and ringing in the ears very similar to that produced by large doses of quinine. In such doses it may also cause an unsteadiness of the nerves and an increased frequency of the heart's action, If this condition is observed during the treatment of a disease it is well to withhold a few doses, when these symptoms will readily disappear without leaving any bad effects.

I have given protonuclein in scarlet fever with the effect of having the temperature decline and the swelling of the glands of the neck disappear, while the rash is coming out. I have given it with great success in puerperal fever, erysipelas, infected wounds, and, in fact, consider it a valuable remedy in all infectious diseases.

Protonuclein also has quite marked tonic effects which are particularly noticeable when given in cases of general debility resulting from advanced age. As a tonic it should be given in from six to nine grain doses after meals and at bedtime. In neurasthenic cases it is of benefit, restoring a normal tone to the nervous system. I have given it in a few cases of whooping-cough with benefit. I have given it to a few tubercular cases but cannot say that it was followed by special improvement. In cases wherein the temperature is high I usually prescribe small doses of phenacetin as a palliative remedy to assist in bringing down the temperature until the protonuclein has time to produce results. I consider protonuclein a very valuable addition to our remedies in combating disease, and feel that all who use it in large doses will be gratified with its results.—*The Physician and Surgeon.*

Medicine.

. . . IN CHARGE OF . . .
J. J. CASSIDY, M.D., AND W. J. WILSON, M.D.

REMARKS ON THE RATIONAL TREATMENT OF PHTHISIS, WITH REFERENCE TO NORDRACH SANATORIUM.

BY R. MANDER SMYTH, M.D. (LOND.),

Late House-Physician Hospital for Consumption and Diseases of the Chest, Brompton.

The Question of Climate.

The almost mediæval darkness which exists amongst the public as regards the necessity of fresh air for all human beings, and especially for those suffering from pulmonary tuberculosis, has of late been considerably enlightened. It is to be hoped, however, that while importance is being rightly attached to this factor of sanatorium treatment, others of equal or even greater moment will not fall meanwhile into the background.

A recent distinguished writer, relating his experiences in the treatment of consumption, states that the only remedies he knew were air and sunshine. Doubtless we must not take this too literally, for a consumptive cannot live, still less make progress, on air or even sunshine, but one might say with some degree of truth that it was a treatment not infrequently attempted.

Diet, and the improvement of nutrition, rest and exercise, and their right adjustment to febrile and quiescent cases, supervision and regulation of every habit of life, are of far higher importance to the consumptive than excessive purity of the air he breathes, or the amount of sunshine he is able to enjoy, desirable as these factors undoubtedly are.

The idea so firmly rooted amongst even medical men that the one thing needful for a consumptive was to live in a "climate" selected with reference to some artificial classification of cases, is gradually giving ground to one more rational—namely, constant treatment in any right environment of all cases regarded from an identical pathological standpoint, that of pulmonary tuberculosis.

Whilst we shall hardly differ much now as to the value of sanatorium treatment, we are by no means necessarily agreed as to its best form. What is the right environment, and what the most successful system? The present attitude of medical thought in this country is directed towards the collection of data to form opinions upon these questions, and for this purpose the already established Continental sanatoria are eagerly reviewed.

It is now forty years since Hermann Brehmer, the founder of

sanatorium treatment, was denounced as a charlatan in Germany for treating consumption in a systematic way, on the assumption that it was curable. Some of his ideas have, it is true, proved erroneous; notably the supposed necessity for carrying out the treatment in a district which was itself immune from the disease, and also his dogmatic requirement of a definite minimum altitude above sea level varying with the latitude. But, on the other hand, his excellent and oft-repeated advice against placing sanatoria in or near centres of life and traffic, or in a health resort frequented by other invalids and pleasure seekers, the need for strict supervision, and for carefully graduated exercise as well as for rest, have all been often disregarded since in practice.

Nevertheless, results more or less favorable have been published by many of these institutions, and although I am far from agreeing with those who pronounce them "superb," yet observers of such experience as Dr. Hermann Weber consider them to be somewhat better than those obtained outside sanatoria in the open health resorts of high altitudes. The success of a sanatorium, however, naturally depends upon many factors, and not only upon the principles of treatment professed, but upon the thoroughness with which these are actually carried out in practice.

Peculiarities of the Treatment at Nordrach.

There is at least one sanatorium on the Continent which stands out pre-eminent both in its methods and results. It has fallen to my lot to obtain a somewhat deeper insight into the working of this sanatorium—namely, Dr. Otto Walther's, at Nordrach in Baden—than can be obtained in the flying visit which a busy medical man can usually afford. I became acquainted with the existence of this institution about five years ago through the illness of a relative, and was later myself a patient there, a sufferer from acute phthisis, having, after recovery, enjoyed the privilege of assisting Dr. Walther in his work.

The methods of treatment differ materially in practice, if not in theory, from those of all other described European models, and the results are proportionally different. It is time, therefore, to draw attention to the exceeding importance of Nordrach in connection with the present movement for the suppression of tuberculosis, which, if it takes the right direction, will be the means of doing untold good in reducing the sum of human misery in our land.

It may appear strange that an institution so successful, beset by applicants at all seasons, should have remained so much unmarked by the medical profession in Germany, as also in England. It is still quite unique, although Dr. Saugmann is engaged in founding what purports to be a similar sanatorium on a fiord of the east coast of Denmark, near Vejle, and I am engaged in establishing a small one in England. The reason is chiefly the careful avoidance of publicity by the physician and the remote and

private nature of the institution, which for the sake of the patient's quiet is not open for every visitor to make a stay in.

One result of this seclusion from the world has been that until quite recently the cases received have been of a serious character, many a patient, drifting from bad to worse in different "climates," and not infrequently in other sanatoria, having come there as a last resource, not usually at the recommendation of his physician, but of some friend who had been cured there.

I am not in a position to publish statistics of the results. Dr. Walther has never done so, considering that as his sanatorium has only been in existence nine years the space of time was not long enough to enable him to make weighty statements about the permanence of cures. I am only able therefore to state as the result of my own observations that though the cases treated are probably of a more advanced nature than those of better known sanatoria, and certainly than those sent to high altitude resorts, the results are actually far better than those obtained in these places.

In reading some recent favorable statistics of treatment in high altitudes one is struck by several things. One is the very high proportion of cases in the first stage of phthisis; in the instance I refer to, sixty-five per cent., as compared with about twenty-seven per cent. in one of the larger German sanatoria. These cases, it is not too much to say, are rarely seen at Nordrach. Yet the average length of treatment in high altitudes was about twelve months, whereas the average for all cases at Nordrach is about five months. Another aspect of the same point is the careful exclusion of all severe and advanced cases from high altitudes. Pyrexial and acute cases of all kinds, cases of double cavities, "catarrhal phthisis" (whatever that may be), and laryngeal cases, were all unsuited for the "climate." Of course, a careful selection of cases makes a vast difference to statistics. Even under ordinary and disadvantageous conditions of life the earlier lesions tend to heal, as every *post-mortem* room amply shows, but the difficulty of making a cure progresses *cæteris paribus* in a geometrical ratio with the extent of the disease. I do not believe, therefore, that altitude has any favorable effect on the course of the disease, and as we see it is said to be prejudicial to the advanced cases. That also I doubt, except in cases in which the loss of lung is so great as to influence respiration in the rarefied atmosphere. It is indeed treatment that is required for these cases, not climate, and hotel life in a high altitude health resort is not treatment, or at any rate it is a very bad one.

I have seen at Nordrach occasional relapses in cases which were expected to remain well, but it must be remembered that comparatively few of the patients come from the leisured classes, and that much depends on the patient's circumstances and way of life in the two years following his cure. Sometimes necessity demands that he should at once return to hard work, sometimes he lives foolishly afterwards. Still, these relapses usually prove slight.

One was the case of a young German who had previously spent two periods of several months each at a famous sanatorium to no effect. He came to Nordrach, became rapidly well, and in the following year went to work on a plantation in Honduras. In an expedition on the coast he had a very severe attack of malarial fever, which brought down his weight. It recurred on his return to Germany. With this upset of his general health there was a slight return of his former symptoms of phthisis. He came to Nordrach last winter, and in two months completely regained his health and strength, and is now at work again in Germany.

Perhaps a good test of the results of treatment is afforded by the case of an English doctor who was the subject of advanced disease, and had tried in turn a voyage to South Africa, a residence in the Riviera, and our own South Coast. He made a complete recovery at Nordrach, returned to London, and there soon fell ill with typhoid fever, losing 40 lbs. in weight and suffering from double pneumonia as a complication. Instead of old cavities bursting into activity as one might have supposed, the lungs emerged perfectly sound from the trial, he regained the weight lost, and now, nearly three years since, he maintains robust health in full work, is able to take long bicycle rides, and to lead a perfectly active life.

In contrast to the list of contraindications given for high altitudes, I have never observed at Nordrach any prejudicial effects of change of season or bad weather upon the patients, and the fact may be emphasized that the inclemency of the weather is often just as great there as in this country, the winters being much more severe. The results are solely dependent upon the character of the disease and the co-operation of patients in their treatment. Results are the same in winter as in summer, and I have seen rapid cures made in periods of comparatively sunless weather. Sunshine, therefore, is by no means essential, though one naturally would not elect to do without it.

Nor, indeed, is extreme purity of the air, though desirable, of such prime importance as has been supposed. I have seen better progress on Nordrach lines made by patients in the dust-laden atmosphere of great cities than one would have expected them to make in the Alps; and I have at present a case under observation, in a great Midland manufacturing town where the leaves of trees become covered with a thick deposit of dust, making the most striking advance under very disadvantageous circumstances.

Pathology of "Chills" and Common Colds.

The timidity of some writers on sanatorium treatment with regard to what they apparently deem the vital factor of treatment, namely, fresh air, is lamentable. "The patient must have fresh air in abundance," say they, "but he must be moderate in its use." He must be well wrapped up, screened from wind, "which lowers the electric tension of the body." His skin must first be rubbed with

spirit and douched to enable him to withstand "chills" and cold. Too much fresh air is apparently as bad as too much drink. One writer gravely states that "a species of drunkenness is produced on the first occasion of going out after a more or less prolonged seclusion in the house." One has heard the expression "air as strong as wine," but never before of the production of actual intoxication!

It is indeed greatly to the credit of Dr. Walther that he has been the first to teach the absolute unimportance of the weather, however bad, in the production of a common cold, which he believes to be due to an infection somewhat similar to influenza, and also with regard to the state known as a "chill," loosely used by the laity to mean as a rule nothing, sometimes a cold or a rigor, but which as applied to consumptives in nine cases out of ten is a definite though insidious relapse due to overexertion, and marked by pyrexia and increased expectoration.

If Nordrach taught us no more than this, it would still be worthy of distinction, and it is necessary to be very clear about these facts, because there is an extraordinary confusion of ideas on the subject. These "chills" occur frequently enough in the populous health resorts, from simple lack of measures for their prevention. Common colds occur, also, accompanying civilization, though I do not believe more frequently in consumptives than in other classes of people. The overexertion, "chill" or relapse rarely happens at Nordrach, because the small number under supervision renders it possible to guard against it, and great care is taken that this is done. A fresh acute cold or catarrh we never see at Nordrach, because the isolation and the open-air life render the chance of direct infection practically impossible; but when occasionally a cold is taken, it is transmitted from a visitor or some member of the staff, and can be traced to the village or station below. A remarkable confirmation of this theory was afforded by the analogy of an outbreak of influenza last winter traced to a travelling pedlar in the valley. Many members of the staff were infected, some quite severely, while not one of the patients, who are constantly exposed to draughts and all weathers, was attacked.

Nor are fresh attacks of bronchitis, pleurisy, and other complications so common in the progress of phthisis, and so often attributed to "fresh cold," ever seen at Nordrach. Where all are making progress towards recovery, symptomatic treatment is reduced to a minimum, and drugs are therefore hardly ever called for.

It is apparent that if the risk of colds and "chills" from exposure can be disregarded, all difficulties in the way of enjoying the fresh air, even in the most changeable climate, such as our own, are at an end. At Nordrach, therefore, no unnecessary "hydrotherapy" or "acclimatization" is indulged in. Patients are at once encouraged to discard overcoats, mackintoshes, and all heavy clothing, in walking, whatever the season of the year, though for the sake of comfort they may wrap up as much as they like while at

rest, but with open windows. No regard is paid to wearing sound boots or keeping the feet or clothes dry, nor even to wearing flannel next the skin, the patient's comfort being his guide in such matters.

Sandals or thin canvas shoes are often worn in winter to prevent chilblains, and in summer on account of the heat. These are soaked through in the first puddle. Personally, in common with others, I practically never wore an overcoat during the last two winters either in England or Germany, and in the country rarely a hat nor carried an umbrella. I have, while a patient, worn wet shoes for days together, sat by open windows for hours in draughts when the temperature of the room was at freezing point, waded in ice-cold water, etc., on purpose to test the truth of this infection theory. But like the schoolboy, who also tried similar means to get a bad cold and play truant, I failed entirely, neither did any other evil follow. It is in truth certain that no harm need be apprehended from an absolutely fearless exposure of consumptives to any weather, in our country as on the Continent, provided overexertion is avoided. A strong wind is not injurious *per se*. It is only in walking against it that a patient is liable to dyspnœa and fatigue—in a word—overexertion. At rest there is no harm, but always good, to be obtained from the free draught.

Treatment of Fever.

Brehmer's original ideas included seclusion for febrile cases, and carefully graduated exercise combined with rest for those free from fever, but most of the modern institutions which have spread through Germany and Switzerland have deviated from these principles, and adopted the less troublesome and less effectual "rest treatment" in the open air, started by Dettweiler, of Falkenstein, which consists in immobilizing even febrile patients on couches in *Liegehallen*, large verandas open to the air, for the greater part of the day.

This treatment has also influenced experimenters in our country. At Nordrach, however, the principles of Brehmer have in reality been more strongly emphasized, and I think it should be stated "that the proper place for a patient whose disease is in any degree active, that is to say, a patient whose morning temperature does not keep below 37° C. (in the rectum), and the evening temperature below 38° C., is in bed, alone in his room with wide-open windows in all weathers, obtaining the maximum amount of rest," which is certainly not possible on a couch in a *Liegehalle*, amongst talkative neighbors and other distractions. Rest on a couch is not the same as rest in bed, and is unfit for all pyrexial cases, although it is largely practised. In fact, the pyrexia of pulmonary tuberculosis is inconsistently accorded far less importance than is demanded in other diseases, the acute specific fevers for instance. It is this inconsistence much more than climatic considerations which still impedes the successful treatment of phthisis in this country as in others.

The Value of Regulated Exercise.

On the other hand, after the temperature has remained practically normal for a week, and the chronic, or acute, inflammatory process is in a quiescent state, regular exercise without fatigue, however slight, is urgently needed to strengthen the weak heart, to stimulate all the functions, to bring about a reorganizing effect on the constitution, and eventually to fit the patient for the stress of everyday life again. This exercise has to be apportioned according to the patient's strength, state of nutrition, and even his temperament, and above all with constant regard to the temperature: so that the quiescent state is never interfered with, but goes on gradually to ultimate arrest. This is obviously a matter that can only be undertaken in surroundings which afford every advantage, and by a physician who devotes his whole energies to the task.

My indictment of the open-air "rest treatment" is, therefore, that it does not provide adequate rest for patients with active disease, nor properly graduated exercise for those whose disease is quiescent. In consequence, I have seen patients coming from other Continental sanatoria with, it is true, a certain accretion of subcutaneous fat, but with flabby tissues, unequal to any exertion when they returned home, and uncured. I have seen these same patients go away after a course of treatment at Nordrach, fully nourished, very muscular, capable of considerable exertion, long walks, etc., and with their disease completely arrested. These facts, I think, clinch my argument.

The Environment Desirable for a Sanatorium.

The environment, therefore, of a sanatorium is of far greater importance than meteorological conditions, and the success of Nordrach is in some measure due to the isolation of the sanatorium from towns and traffic. The nearest stations are nine and ten miles away, the nearest town seven miles distant, and cut off by hills rising 1,500 feet above the sanatorium. It is, therefore, impossible for any but the strongest, who are nearly ready to leave to make these walks, and without making invidious comparisons, I need only give one instance out of many to show the importance of this. A young English girl who was for some months at a large German sanatorium, and who has since been cured at Nordrach, told me that patients used to go out into the adjacent villages to drink, and that she had sometimes seen them driven home drunk. Comment is needless, except perhaps to add that where such things are possible, no wonder "*hydro*-therapy" is found necessary to prevent "chills"!

The Advantages of Small Sanatoria.

Another very important point is the size of the sanatorium. In a large barrack a patient is lost in the crowd, so to speak.

The Nordrach sanatorium has been wisely limited to forty-five patients, distributed in four houses of four, five, sixteen and twenty beds, although great pressure is put upon the accommodation, and vacancies are taken up two, three and four months in advance. Probably no sanatorium should have more than fifty beds, and not even so many unless the supervision is highly satisfactory. To quote yet again. A German gentleman, who had been treated at a large sanatorium, told me that he once went away for three days to the neighboring city for amusement, without his absence being noticed by those in charge of the institution!

Some sanatoria allow friends to visit the patients from the very commencement; at one it is possible for the whole family to live with the patient. This execrable arrangement contravenes the first essential of sanatorium treatment—namely, that the patient should be absolutely removed from his home surroundings, and detached from the environment in which he continues to lose ground or remain stationary.

At all events it is most essential that at first he should be left entirely to the doctor and nurse, until indeed he is fully settled in the new way of life. The influences of friends, however intelligent and well intentioned, are in the majority of cases undesirable. It must naturally be so, for the friends know nothing of the patient's needs and supply him with sympathy when he wants only rest and quiet; and those whose needs are the greatest, who must refrain from conversation and mental exertion, who must conserve in short their diminishing vital energy, are often visited for the very reason that they are ill in bed.

The way of life in the great health resorts is, of course, worse still. Such a place as Davos reproduces and perhaps adds to all the evils of the home surroundings. Hotel life in a town, with "caretakers," that is, untrained friends in attendance upon the invalids, brings with it temptations of all kinds in the shape of amusements, theatres, balls, even violent exercises, which, so far from conducing to the patient's health, in many cases produce "chill" after "chill," that is, relapse after relapse, so that what may have been an early and curable case becomes, perhaps, well-nigh hopeless. Even amongst these, however, I have seen the most extraordinary arrests produced under the *régime* of Nordrach, arrests that one would have deemed incredible had not one observed their whole course.

The physicians at most of the high altitude resorts are practically consultants, although I understand that many arrange now for a season fee in order to see their patients as often as they like. That is a step in the right direction, but the control is very slight, and however good advice may be, it is impossible to be sure that the patient carries it out. No wonder we find medical writers seeking a refuge in a list of contraindications. "Pyrexial cases," says Dr. Theodore Williams, "should not go to high altitudes for as a rule the climate augments the pyrexia." Why? Is it indeed

the climate that is to blame, or is it the mode of life the patient leads in that climate? In the few cases I have investigated in high altitudes the persistence of pyrexia was simply due to the fact that the patients were walking about with active disease.

Von Jaruntowsky says that the "action of the climate is too strong for the late stages of phthisis." Perhaps his remark had been better altered in translation to "the treatment is not usually strong enough for such cases." Amusements, in the usual acceptation of the term, are not so necessary when the treatment is efficacious, for then the patient's mind takes a positive emotional tone from the hopeful character of his surroundings, the disease loses its terrors as its curability is demonstrated, and he finds an occupation and interest in "working out his own salvation."

It is certainly a plausible theory that amusements are harmless in moderation, and even necessary for the patient's comfort. Unfortunately human nature, especially consumptive human nature, is not firm enough to draw the line at strict moderation. Even in a small institution it is difficult enough to regulate individual temperament unless amusements are very limited and unexciting, as Brehmer himself well knew. One of his sayings was—and there was no truer maxim in his writings—"*Der Mensch stirbt an seinem Character.*" And again, in quoting from the *Davoser Blätter*, he says: "What kills us at last is not usually consumption but our temperament." In fact, at many health resorts one would imagine that the patient's business there was to be amused, rather than to be cured.

For this reason, also the principle laid down by Dr. Leon Petit —that access to a sanatorium should be easy and not far from a railway station—is thoroughly bad in practice. Easy access means the proximity of that civilization which it is so necessary to avoid if absolute quiet is to be obtained, and the nearer the civilization the more difficult is rendered that *al fresco* and unconventional life which the patient ought to lead.

Diet.

There are other points which might be touched upon, more especially the great question of diet. It will, however, suffice for the present to say that in many sanatoria there is no proper guidance for the patients in the selection of their food, and too many meals are usually provided. Only three meals a day are given at Nordrach, and yet a much greater improvement of nutrition is usually brought about there than in other institutions. Forty or fifty pounds (German) is by no means an uncommon increment. In one case a patient weighing under one hundred pounds (German) went away 190 pounds. In another case a lady who weighed sixty pounds went away over 150 pounds. Both these cases were most serious: the latter was for weeks subject to profuse diarrhœa, probably tuberculous. They have been both cured, the latter for the last seven years.

Discipline.

The methods of a rightly conducted sanatorium are, then, strictly analogous to the splint, which in surgical cases of tuberculosis keeps the diseased part continuously at physiological rest. The methods of a populous health resort hardly constitute a splint at all, and whatever restraint the treatment affords is customarily applied only in the winter. What surgeon would commit the folly of treating a tuberculous ulcer in the winter only, allowing the patient to be practically free from treatment during the summer months? And yet this is precisely what happens to many a similar case of tuberculous ulceration of the lungs, owing to our fallacious notions about climate.

In a sanatorium much depends, as I have already said, on the degree to which theoretical principles are put into practice, The splint may be so loosely applied that it may only be effective in comparatively slight cases. The best climate, then, is not, as has been poetically said, that which woos one most into the open air, but that in which this "splinting" is most effectively carried out.

It has been said that English people do not care to submit to the rigid discipline practised abroad. An observation of the faces gathered around the dining table at Nordrach will entirely dispel this idea, and will demonstrate that hope is more effectual than dissipation and distractions in making the invalid contented with his temporary lot.—*British Medical Journal.*

Not so bloody after all.

According to the Philadelphia *Medical Journal*, official reports received by the United States War Department from time to time, giving the number of men and officers who have been killed and wounded and who have died from disease in the American army from the beginning of the war up to August 31st, 1898, show the following figures, which are accurate as far as reports have been received, and will be used by the Military Investigation Commission :

	Officers.	*Men.*
In Porto Rico, killed	..	3
" " wounded	4	35
In Manila, killed	..	15
" wounded	10	83
In Cuba, killed	23	237
" wounded	99	1,332
Died from wounds received	9	82
" " accidents	..	30
" " diseases, etc.	75	2,150

These figures, which may be changed slightly by later official reports, show the total number of deaths in the army of 265,000 to have been 2,624, or a little less than 1 per cent.

Proceedings of Societies.

THE PROVINCIAL BOARD OF HEALTH.

THE fourth quarterly meeting of the Provincial Board of Health commenced on November 29th, at 11 a.m., in the office of Dr. Bryce, the Secretary, in the Parliament Buildings. The members present were Dr. J. D. Macdonald, Hamilton, chairman; Dr. J. J. Cassidy, Toronto; Dr. H. E. Vaux, Brockville; Dr. E. E. Kitchen, St. George, and Dr. Bryce.

In the morning, samples of water from which the village of Stirling proposes to draw its supply were submitted, with the plans of the proposed system. Oak Lake, situated about three hundred feet above the town, is the source of supply, and the Board expressed doubt as to whether such a supply for a village of eight hundred inhabitants would not become stagnant. They decided, however, that as the water was wanted chiefly for fire protection there would be little danger incurred, and consequently approved of the plans submitted, reserving the right to order any changes should the proposed system prove dangerous to the health of the villagers.

In the afternoon the Board first considered a letter from Dr. Goodman, Health Officer of St. Catharines, asking the Board to stop the construction of a ditch between Welland and Port Colborne for the purpose of draining the Humberstone marsh into the Welland Canal. Dr. Bryce had communicated with the Minister of Railways and Canals, who said there would be a natural objection to using the canal for drainage, as it is used for water supply. The Board decided that the canal was not to be used for a drain for the present, and the matter was left *sub judice*.

Dr. Bryce, in his report, said the past quarter had been marked by a low mortality from the several contagious diseases. There had been one case of smallpox at Chatham, four at Camden and one at Cobourg. The prevalence of the disease in New York State, Ohio and Michigan would be a menace to the Province, and local authorities are advised of the danger arising from the general neglect to vaccinate school children. Glycerinated vaccine antiseptically prepared was recommended. Such a condition as that illustrated by the report forwarded from the Department of Agriculture at Ottawa regarding the condition of large piggeries near Ottawa, where the city offal is fed, revealed a state of affairs which Dr. Bryce had again and again vainly attempted to deal with. Conditions but little better exist in the neighborhood of all our large centres, and in spite of the fullest powers to deal with such, under the Public Health Act, the rural boards have proved utterly

useless for the purpose. Raw, putrid offal is systematically fed, although the animals are liable to seizure, and a heavy fine for the offence can be levied. A county officer, with full powers to inspect, suggest remedies, and prosecute for non-compliance, is so far as the doctor knew, the only remedy. As at Welland, Merritton and St. Catharines all use the canal water as a public supply, it was essential that it be maintained pure, and not used to drain certain swamps, as suggested. Reference was made to several outbreaks of diphtheria in the back settlements and unorganized districts of Frontenac, Hastings, Muskoka and Parry Sound.

The Board, in Committee of the Whole, dealt with the Secretary's report Dr. Bryce laid before them the plan adopted by several large American cities, where the school districts are divided and placed under the supervision of capable physicians, whose duty it was to visit each school after morning prayers. There they had special rooms, where pupils who appeared at all ill were sent for examination, and if necessary sent home for treatment. Then the physician was furnished with a list of absentees, and each home was visited in quest of sickness and contagious diseases. In this way almost every disease peculiar to children was discovered in its incipiency, contagion was prevented, and cases isolated instead of being shielded, as is sometimes done. This was agreed to be a splendid means of combating disease, of stamping out scarlatina, measles, etc., and obviating the necessity of closing schools, to say nothing of saving lives. In Boston fifty physicians did the work during 1896 for $9,800. The Board strongly recommended, that Local Boards, in the municipalities where contagious diseases exist, appoint medical inspectors, as empowered by Section 9 of the Public Health Act. Copies of a resolution to that effect will be sent to every Local Board of Health and to the Minister of Education, with a request that such be forwarded to the boards of school trustees throughout the Province.

The Board met again at 10.30 a.m., November 30th.

An itemized account for $1,405 from the municipal authorities of Cobourg, for expenses incurred in connection with the recent case of smallpox in the town, was presented, but no action was taken on it.

Mr. Mackenzie, Provincial Bacteriologist, reported at length on an epidemic of typhoid in Kingston Township, which had probably originated from a polluted well.

The Board will take steps to cope with an outbreak of diphtheria at Hawkestone, Ont., which has caused no less than nine deaths in one family.

At the afternoon session Dr. Cassidy read a paper, entitled "The Disinfection of the Domiciles of Tubercular Patients." "The necessity," said the doctor, in his opening statement, "of disinfecting the domiciles of persons who die of tuberculosis, or even rooms in houses which have been temporarily occupied by tubercular patients, seems obvious enough to sanitary authorities:

and the reason for this is simply because we believe that tuberculosis is a disease which may be transmitted from one person to another. Remove the cause, and the effect disappears. In fact, one of the postulates of sanitary science in reference to the prevention of tuberculosis is: Remove the bacilli tuberculosis from inhabited places, prevent the deposition of fresh bacilli therein, and a vast diminution in cases of tuberculosis will soon be apparent."

In order to closely observe cases of tuberculosis and carry out disinfection, the doctor recommended that tuberculosis be made a notifiable disease, the subsequent management of any given case to be conducted so as to obtain the best result, whether in a domicile or sanatorium. In order to ascertain whether disinfection of the domiciles of tubercular cases was practised by health officers in Ontario, inquiries were addressed by Dr. Cassidy to the health officers of Toronto, Hamilton, London, Ottawa and Kingston. It was quite evident from the replies received, he said, that this most important feature in the prevention of tuberculosis was neglected in Ontario. As showing what might be done to decrease the prevalence of tuberculosis in Canada, the Parisian method of disinfecting the domiciles of the tubercular poor was described. (See page 372 of the CANADIAN JOURNAL OF MEDICINE AND SURGERY, December, 1898.) In Paris the principal obstacle to practical disinfection has been the notification of the patient's disease to the health authorities. This arose from the unreasonable terror of some persons when confronted with the dread word "contagion." The only remedy for ignorance was instruction, and when the people of Ontario learned how the contagion of tuberculosis was acquired they would not object to the systematic removal of the sources of that contagion.

Dr. Bryce also read a lengthy report bearing on the establishment of cottage sanatoriums in Ontario. In this the doctor gave a classified list of persons who had died from tuberculosis during a certain period, showing that the mortality was greatest among bread-winners whose occupation compels them to remain indoors. The doctor cited well-known medical authorities to prove that an abundance of fresh air in the bedroom at night, as well as in other parts of the dwelling, was a great safeguard against tuberculosis and helped to retard its spread. Dr. Bryce gave a number of facts regarding the practice adopted by insurance companies in Germany of sending tubercular patients holding policies to sanatoriums, and of promoting the establishment of such institutions.

The Board went into committee to consider the recommendations made in both these reports. After discussion, the following resolution, moved by Dr. Cassidy and seconded by Dr. Bryce was adopted, "That in the opinion of the Board it should be made obligatory on physicians to report all cases of tuberculosis occurring in their practice; if a physician is not consulted, then this duty should fall upon the householder; that the local health board

should provide for the regular and systematic disinfection of the domicile in which the patient lives, and should be notified of the removal of any tubercular case to an hospital or a sanatorium."

The plans for waterworks and sewers at Prescott were presented by Mr. Galt, C.E. They were adopted, subject to the usual proviso, that should the water supply become impure, the municipality shall be obliged to accept the decision of the Board in obtaining a fresh supply.

Mr. Galt also presented the plans for waterworks and sewers at Oshawa. They were approved of, subject to the proviso that a supply of ice be not taken from a pond in the town into which a sewer is permitted to discharge.

The Board then adjourned. J. J. C.

RESOLUTION OF CONDOLENCE.

At an emergent joint meeting of the Medical Board of the West-Side German Dispensary and the Corps of Professors of the New York School of Clinical Medicine held at the Dispensary and School building, the following resolutions were adopted:

Whereas, we have learned with great pain of the death of our friend and colleague, Salmon P. Cahen, M.D., Secretary of the Medical Board of the West-Side German Dispensary, and Associate Professor of Practice at the New York School of Clinical Medicine; and

Whereas, Professor Cahen, by his nobility of character, scientific attainments and devotion to the sick poor, endeared himself to us as a man and a physician; and

Whereas, his death is to us an irreparable loss; be it therefore

Resolved that in manifestation of our deep grief, we ask that the Dispensary and School be closed on Friday, the 9th instant, until 1 p.m., that all connected with these institutions may attend the services in a body; and furthermore, be it

Resolved that four copies hereof be engrossed, one to be given to the widow of our friend and colleague, another to his brother, James P. Cahen, Esq., President of the Board of Trustees, another to Julius P. Cahen, Esq., Secretary of the Board of Trustees, and another to be placed in the Assembly-room of this Dispensary and School; and further, be it

Resolved that a copy of these resolutions be spread upon the minutes of the Medical Board of the West-Side German Dispensary, and upon the minutes of the Corps of Professors of the New York School of Clinical Medicine, and be it further

Resolved that copies hereof be furnished the medical journals of New York for publication.

Louis Fischer, M.D.,
Secretary N. Y. School of Clinical Medicine.

Ferd. C. Valentine, M.D.,
President Medical Board of West-Side German Dispensary.

Personals.

Dr. Alex. Primrose has removed to his new house, 100 College Street.

Dr. G. H. Burnham has removed from John Street to the corner of Bloor and Huntley Streets.

The *Canada Lancet* has been purchased out and out, and is now under the sole control and management of Dr. G. P. Sylvester.

E. B. Treat & Co., of New York, have assumed entire control of *The Archives of Pediatrics*, so ably edited up till now by Dr. William Perry Watson.

We tender our sympathy to Dr. R. J. Wilson, of Toronto, in his recent bereavement. His esteemed father died last month at the mature age of eighty-two years.

Dr. L. M. Sweetnam and Dr. H. W. Aikins were elected at the recent Victoria University elections by a large majority. Dr. Edmund E. King was defeated.

We are much pleased to announce that Dr. W. H. Lowe, of Toronto, whose connection with this journal has been so much appreciated, is recovering from his recent severe illness.

At the meeting of the Senate of Toronto University last month, Dr. William Britton, of Toronto, was re-elected as the Senate representative to the Medical Council. Dr. L. S. Oille, of St. Catharines, a distinguished graduate in Arts and Medicine, was also nominated, but by a vote of twenty-seven to six Dr. Britton received the appointment. He has represented the University on the Medical Council for eight years.

Our December Number.

It has been the greatest source of satisfaction to the staff of this journal that our December issue met with such widespread approval. We only regret that it was out of our power to acquiesce with the hundreds of requests we received from all parts of Canada and the United States for duplicate copies of the Journal. We printed a large number of extra copies, but they were all gone in less than a week from date of issue. We only hope that we will continue to merit the esteem of the medical profession all over this picturesque country of ours, which we attempted to illustrate as a fitting souvenir of Christmas-tide. W. A. Y.

The Canadian Journal of Medicine and Surgery

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Oral Surgery—E. H. Adams, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

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Editorials.

Wishing all our readers success and prosperity for the New Year.

EXPERIMENTAL TYPHOID FEVER.

DR. FELIX RAMOND, who has made experimental studies of enteric fever in rabbits, has written an article on the subject in *La Presse Medicale* (July 16th, 1898), an abstract of which we have much pleasure in laying before our readers. He found it necessary to adopt certain precautions, in order to overcome the resistance of the animal economy to the typhoid poison and to ensure inoculation. Thus, during the fifteen days which preceded the ingestion of the Eberth bacilli, each animal received every day, subcutaneously,

three or four cubic centimetres of blood serum, taken from men who had not had typhoid fever, and a few minutes before the ingestion of the typhoid bacilli, the experimenter injected into the peritoneal cavity of the animal fifty drops of laudanum. The virulent culture used was mixed with the animal's food and introduced into the mouth, by tickling the back of the throat so as to obtain reflex movements of swallowing, or directly into the stomach through a catheter. The following symptoms were observed in the animals experimented on: some hours after the ingestion of a dose of five cubic centimetres of a young culture of Eberth bacilli in bouillon, the temperature rose to 104° F. or 105⅘°. The animal did not eat during the day. The next day it seemed to return to the normal condition, but the temperature remained elevated above the normal by a few tenths of degrees. On the following days the animal lost from 150 to 200 grammes in weight, and its appetite diminished slightly. About the twelfth day there was an abrupt elevation of temperature, which reached or surpassed 104° F.: then for fifteen days the fever continued, rising from 1° to 4° F. above the normal temperature. During the course of the disease the appetite was diminished, diarrhœa appeared irregularly for four or five days, respiratory movements were reduced in frequency, the urine did not contain albumen; the prostration of the animal was evident, it did not escape at the approach of the experimenter, but remained curled up with its back arched, its head bent beneath its shoulders, its ears hanging and its eyes half closed. If the disease was going to terminate favorably, about the fifteenth day the symptoms improved, and in a short time the animal returned to its normal condition. Sometimes, however, the animals died rapidly from peritonitis or typhoid septicæmia. In other cases the infection revealed itself only by some very slight symptoms: a temperature elevated above the normal by a few tenths of a degree, slight diarrhœa, insignificant emaciation and about the twelfth day, the normal condition was regained. However, if one of these animals, which was on the road to recovery, was sacrificed, a sowing of the visceral pulps always revealed the presence of the Eberth bacilli. Moreover, the appearance of the serum reaction from the ninth to the twelfth day sufficed to prove the reality of the infection. In all cases of survival more or less long, the serum reaction appeared at the beginning of the second week; it was always very manifest, even when diluted samples of blood serum were used, and persisted for two months after recovery. The anatomical lesions were similar to

those observed in human typhoid fever; the small intestine was congested and filled with diarrhœal matters; Peyer's glands were prominent and had bloody dots on their surfaces; some of them showed ulcerations, shallow, it is true, but clearly defined. The mesenteric glands were hypertrophied; the spleen was voluminous and blackish, the liver congested, broncho-pulmonary and pleural lesions were pretty frequent. The author then describes the microscopic study of the infection, made from sections and sowings of the visceral pulps, showing how the Eberth bacilli can be traced and how a rational conception of the pathological physiology of enteric fever in an animal can be obtained. In the first or lymphatic stage, which perhaps corresponds to the incubation of the disease, the bacilli invade the follicles of the intestine, advance and reach the mesenteric glands. Having forced a passage through this glandular barrier, they reach the thoracic duct, and afterwards the general circulation, where their stay is short, and this constitutes the blood stage. Then they settle in the different viscera, especially the spleen and the liver, and this is the visceral stage, corresponding probably to the period of infection. Some differences observed between experimental and human enteric fever were: in the animals experimented on, the ulcerations were rather small, the microbes in the viscera were not numerous, and no renal lesions were observed. The explanations offered are: normally an animal does not contract enteric fever, probably because of the great resistance of his tissues to the development of the typhoid bacilli. If the infection is produced in him, the organic defence will be vigorous; the greater part of the microbes absorbed will be rapidly destroyed, so that the intestinal ulcerations will be small and there will be a paucity of Eberth bacilli in the visceral pulps. The toxins which inhabit the intestines will not be absorbed as they would be through the large intestinal ulcerations of a man attacked with dothienenteritis. The animal's kidneys will, therefore, have to eliminate only the Eberth bacilli, which will cause but slight damage, inasmuch as experimentation shows the very slight elective action of that toxin on the kidneys (Chantemesse, Sanarelli). The digestive functions and urinary excretion suffer, therefore, from only slight obstacles in an animal affected with enteric fever, conditions which, unfortunately, are but little met with in human pathology. The child, however, appears to realize an infection almost copied from that of the animal; in children who have enteric fever the intestinal ulcerations are small, the digestive functions

are not much interfered with and renal lesions are exceptional. The morbid evolution of the disease is also more favorable than in the adult.

These experiments on animals prove the reality of the infectious process from an intestinal starting point. There is, however, much yet to learn about the etiology of enteric fever. Why does not the Eberth bacillus, which, according to Remlinger, is an almost normal inhabitant of the human intestine, cause infection more frequently? Why does this bacillus alone appear to pierce the intestinal barriers? Dr. Ramond can only give hypotheses for answers. Perhaps these infections which do occur, may result from special chemico-toxic phenomena or from microbic symbiosis, as occurs in cholera. These questions cannot be answered at the present time; but perhaps experimentation and clinical observation will ultimately solve the difficulty. J. J. C.

A DINNER, A DIGRESSION AND A TRIBUTE.

To say that the twelfth annual dinner of the University of Toronto Medical Faculty was a success does not sufficiently express the thought and feeling of those who had the genuine pleasure of being present. The decorations, the splendid attendance, the college songs, jollity and enthusiasm of the students, the clever after-dinner speeches, the inimitable manipulation of an orange by the guest from Johannesburg, were thoroughly enjoyable. The menu card is a souvenir treasured with the accumulated bric-a-brac of the years—it is unique with its blending of the artistic, poetic and comic. The feast of good things which it enumerated was enough to make one feel like the small boy who, standing in front of a restaurant looking at a Thanksgiving bill of fare, festooned at the top by a real live turkey, said to his chum, "Say! I'd like to be found dead with that turkey in me tummy and that bill of fare for me epitaph."

The supreme object of the dinner was not, of course, the material, but rather the intellectual, and so the speeches partook of the progress of medicine and subjects closely allied thereto. One speaker, in referring to the demand frequently made for a higher standard of graduation, declared himself in direct opposition to the proposal. May we here claim a scribbler's license to digress from the subject of the dinner, to differ with the opinion of our respected confrere and put in a plea for the raising of the stan-

dard of medical education. We believe in a higher standard of graduation for several reasons: the one important one which allotted space will allow us to speak of is, on account of the overcrowded state of the ranks of the medical profession. To support the dignity of this noble calling the medical practitioner of to-day should be a man of high mental culture and exalted moral perceptions. True, someone has wisely said, "It is not at school but by his self imposed studies afterwards that a man is educated." The world fortunately recognizes its need of medical men, but the supply is much in excess of the demand. We believe the majority of physicians feel that the gateway to medicine has been left too long half open, and the pathway to the goal of M.D. has been strewn with too many flowers of encouragement, and so, instead of the few who should have entered, the gateway has been thronged, and the yappy yell of capping day is ever resounding through the land. We do not agree with the thought that the practice of medicine would become the province of a close corporation if a higher standard of preparatory education were enforced; enough men will always be found surmounting the difficulties of the most rigid examinations and enduring the longer years of application to study, and ultimately stepping forward to take the places of those who have fallen in the harness. Why is it that some are deserting the ranks of legitimate medicine and entering the lists of the quacks? Because, we believe, owing in a small measure to their own inability, but in a very large degree to the over-supply of medical men, they were compelled to eke out a miserable existence and face, perhaps, starvation.

Is there any remedy for this state of medical existence? We think at least a partial one suggests itself. It is this: If before all students enter the medical colleges they equip themselves with the degree of Bachelor of Arts, then acquire a thorough medical education, life would hold out to them more than one possibility, because of their broader field of culture; and if, perchance, they should not attain the top of the ladder of success in the medical world, they could gracefully withdraw themselves and turn to some other calling, rather than cling to the skirts of a departing hope, to beg, or starve, or sink with the dregs of its offscouring. So in justice to student and physician alike, let those men be "Arts men" who present themselves for the study of medicine; then let the medical graduation standard be higher, the examinations even more difficult, and the years not less than five for the medical course.

Then will the life of the medical man adjust itself, its environments be broader and richer.

We do not wish to set forth the idea that the Canadian physicians of yesterday were ill prepared for their work. Life then and here (in Canada) was totally different. Calomel and quinine worked wonders under the bits of sky seen through the clearings in this forest primeval. To the grand old practitioners be all honor. They were progressive, wonderfully so, for their opportunities. Studious, self-reliant and patient, they stand out strongly as men of bronze against the glaring sky of modern commercial medicine, embodying a philanthropy that has been crowded out of the character of the modern men by the mad rush for the almighty dollar. We devoutly thank, however, the ever-increasing opportunities for a liberal education that to-day offers, and look forward to the dawn of a new century to throw its new light upon disease and its varying conditions. W. A. Y.

UNITED WE STAND.

The Editor and collaborateurs of The Canadian Journal of Medicine and Surgery met at McConkey's on Saturday evening, December 17th, making dinner the ample excuse for toasts, songs, fun and fancy—in truth, a feast of reason and a flow of soul, a good-bye to another year's work, marked by hearty enthusiasm and the co-operation of one and all. They met just to take a cup of kindness, and wish each other *bon voyage*, as they stood on the pier awaiting the launching of the good ship "Ninety-nine." The only drawback to the evening's pleasure was the unavoidable absence of several members of the staff who reside in other cities. The following poem, composed for the occasion by Dr. Ezra Hurlburt Stafford, was read during the evening:

THE OLD VILLAGE DOCTOR.

They asked him out for dinner to their city club one night,
And warmly shook his hand and placed him at the honored right;
Professors, surgeons, specialists, sat round in broadcloth suits;
And he felt stiff and awkward in his tweed and muddy boots.

He was a country doctor, and his hair was white as snow:
One of the old profession, who practised years ago
Out in the smoky clearings ere life became so fast;
One of the last survivors of a race that's almost past.

He couldn't clearly understand all that he heard them say,
For medicines had changed so much since his empiric day ;
And so he sat in silence, gazing with uneasy eyes,
And tried to look, as doctors do, unfathomably wise.

Amid the clink of glasses and the aromatic smoke
The long chain of remembrance from forgotten years awoke ;
And when they drank the old man's health with deference sincere,
He could not see their faces, for their kindness brought a tear.

And nervously he spilled the champagne that he tried to reach,
And vehemently shook his head when called on for a speech ;
Of no avail, the smiling line of faces down the board
Called louder, till at last he rose, and silence was restored.

" I thank you, gentlemen," he said, "your kindness reassures,
And makes me think you of my time, or think myself of yours ;
And yet an old physician of a rude unlearned day,
In such a gathering as this can not have much to say.

" For all is changed since I began, and nothing is the same ;
You've given each old familiar ache a new Hellenic name.
On horse-back twenty years, and in my sulky twenty more,
I practised in these counties, and was known at every door.

" The early pioneers were sometimes ignorant and poor,
But still I tried to do my best, for it was kill or cure.
The cholera lurked in our midst, ship fever and despair,
And pus was not as laudable as my intentions were.

" In chronic pleurisy I used to fill the sack with port,
The fever and the ague were mere intellectual sport ;
I opened lumps and felons with a cheerful, hopeful face,
And amputated at the knee with a peculiar grace.

" I washed my hands, and used my knife, and tried to keep my head,
And when a man had ceased to live, I said that he was dead ;
Jalap was my great favorite, but fresh gamboge was good,
And I used calomel those days as you use Nestle's Food.

" I've forded winter streams, not once, beneath the midnight stars ;
I've wakened when the horse I rode stopped at the homestead bars.
My day's work in those holy years perhaps will make you smile—
I've made a hundred visits and I've covered fifty mile.

" I've been both nurse and accoucher beside the settler's wife,
Three thousand little infant hands I've welcomed into life.
It wasn't much, but 'twas my best, among the sick and poor ;
I wouldn't go through it again, and yet, I'm hardly sure !

" For ten years past I've tried my best to quietly retire,
They do not need me any more, and rest the old desire ;
And so I give each college lad who sets up in the spring
A helping word, but it is always just the same old thing.

" As long as it was ringworm or a bit of chicken-pox,
They call the civil young man in, and listen while he talks ;
But when it is lung fever or typhoid it's sad to see
The foolish way they have of posting out of town for me.

"I say I'm an old fossil, but they smile and will not heed.
And yet, thank God, I think I've sometimes cheered them in their need.
There are worse things than sickness, and I've striven all my life
To help the poor—a thing I could afford—for I've no wife.

"No, Amy Barnerd all the distance from New Hampshire came
To share my house and hold my heart and take my honest name.
The cholera was raging then—way back in thirty-four—
And she grew pale and sickened ere we entered at the door.

"She died there in the woods with me, there was no soul in miles;
She died there, looking up at me so ghastly in her smiles.
I buried her beneath the trees—she whispered that I must!
From ashes unto ashes, and from dust to quiet dust.

"And so I worked the harder to forget. The years rolled by,
The forests slowly disappeared, the swamps were drained and dry;
And all is new and strange to me, who, while old customs wane,
In a new order of ideas confusedly remain.

"Linnæus is forgotten now; no prudent hand disturbs
The simples that we used to prize, and irritating herbs.
We used to bleed them in the arm, but now the plan reverse,
And spare the supplicating arm to bleed them in the purse.

"We weren't bacteriologists, but yet we understood,
Somehow, life's secret sympathy, and did the poor souls good,
Wherefore I sometimes fancy, though from pride I must refrain,
That taken so, with all our faults, we did not toil in vain."

EZRA HURLBURT STAFFORD.

PHYSICAL ADVANTAGES OF DANCING.

THAT dancing is an excellent and healthful form of physical exercise, few physicians will be inclined to deny. Conducted properly, in an outdoor pavilion in summer, in a well-ventilated room in winter, it confers benefit on the feeble as well as the strong. This form of exercise is doubly beneficial, because it is accompanied by exhilaration of mind and offers a delightful means of getting rid of the "carking cares" which beset sedentary individuals and all those who require a healthful stimulus for the digestive organs. In fact, as Mr. Sheldrake, a medical writer, puts it, "If it is learned from those who are well qualified to teach it, and practised as it ought to be, consistently with the instructions given, dancing will contribute more to improve the health as well as the form of the human frame than any other exercise."

While so much will be conceded by everyone, all are not agreed as to the hours at which dancing parties should close, and it never will be possible to obtain a consensus of opinion about a question

which must in the end be decided according to the taste of each guest. At private parties in this country late hours are not frequently indulged in; but in the United States, according to newspaper reports, the reverse is true. A number of prominent Philadelphia women have reached the conclusion that gentlemen who attend fashionable dancing parties do not obtain enough sleep, as they are often busy men of affairs. To dance and act the agreeable from 9 p.m. to 2 or 3 a.m. next morning, and then to appear in the world of business before noon, is, from their standpoint, to carry on a programme which cannot fail to destroy both mind and body.

There seems to be a certain spice of truth running through this complaint, but when all is said, it must be confessed that the occasion of the complaint is not a sign of degeneracy. Earlier hours will, no doubt, be a solace to the elderly guests, and will do no harm to young roysterers; but such an innovation will never prove popular so long as young people dance. To the weary laborer,

> "Oh, sleep, it is a gentle thing,
> Beloved from pole to pole,"

and in that deep, dreamless sleep which follows toil he gets a physical compensation which wealth cannot buy, and which sends him to his work next morning with an unclouded brow. To the worshipper at the shrine of fashionable society, whose daily physical exertions are of the gentlest description, rest is very sweet after "chasing the glowing hours with flying feet," and if he will only be careful to avoid unwholesome comestibles and beverages, his dancing may to a certain extent atone for the errors of an indoor life.

In any case, since America has put her armor on and the twentieth century seems to belong to her, an abundance of physical vigor in her young men and young women is a healthful sign of future national strength, and a prognostic that what she has won by the sword shall not be lost through luxury and indolence. J. J. C.

THE HYGIENIC TREATMENT OF CONSUMPTION AT NORDRACH.

Our readers, who are interested in the most recent views on the treatment of consumption, will be pleased with the perusal of a

paper by Dr. Mander Smyth, published in the *British Medical Journal* for October, and which will be found at page 42 of this issue. The opinions expressed by the writer, himself at one time a patient at the sanatorium in the Black Forest, and now able, after his cure, to resume practice in England, are startling and even revolutionary. There is an old saying, however, to the effect that "nothing succeeds like success." If further experience in northern countries shows that the Nordrach plan is the right one, it will be peculiarly interesting to Canadian sufferers from consumption, who abandon their homes, often at great expense, to spend the winter in California.

There is good reason to think, also, that a physician, practising in a retired portion of Ontario, could attend to a small number of phthisical patients and preside over the accomplishment of curative results, which would compare favorably with those obtained in Baden. The climate of that portion of Germany is subject to considerable variations, like that of Canada, being hot in summer and cold in winter; but weather does not seem to have had any influence on the curative results obtained at Nordrach.

Apart from the treatment of fever by rest in bed, with the windows of the bedroom kept open night and day, the method adopted by the manager of the Nordrach Sanatorium consists principally in causing the patients to take a good deal of regulated, outdoor, walking exercise, short of fatigue, in all kinds of weather; to breathe pure air, through open windows, when indoors; to take three nutritious meals each day, and to observe strict discipline. J. J. C.

THE TORONTO ORTHOPEDIC HOSPITAL

The first patient was admitted to the Toronto Orthopedic Hospital last July. The hospital is situated on the north side of Bloor Street a short distance east of Yonge Street. It begins with accommodation for twelve patients. The private rooms are in a separate building. Additional accommodation will be provided as demanded, it being the intention to construct the hospital buildings on the cottage or pavilion plan. The out-patient department is open from 1 to 3 p.m. on Monday and Thursday. The work of the hospital is limited strictly to the lame, crippled and deformed, and no cases of a general medical or surgical nature will be admitted. It is the only hospital in Canada devoted exclusively to orthopedic surgery.

The hospital is completely equipped for every department of the work which it has undertaken. All the orthopedic appliances required for the patients are manufactured by trained mechanics on the premises. The application of corrective gymnastics to certain conditions, such as lateral curvature of the spine, a-symmetry and deformity resulting from muscular weakness and paralysis, the pigeon-breast of rickets, etc., is fully provided for in a specially equipped gymnasium. The operating room is exceedingly well lighted, the tables are all of enamelled steel, and the general equipment such as is required for aseptic surgical work.

A training-school for nurses is in operation, under the direction of the Lady Superintendent, Miss L. E. Applegath.

The Government Inspector, Dr. Chamberlain, has visited the hospital and expressed himself as well satisfied with it.

The hospital is strictly undenominational, and its benefits are available to rich and poor alike. Recognizing, however, the growing willingness of the public to accept hospital charity, the trustees and the staff are determined to restrict the charitable work of the hospital to those whose circumstances entitle them to free treatment. While, therefore, the poorest patient will be considerately dealt with, the profession is asked to co-operate in the effort to keep the Toronto Orthopedic Hospital free from the shameless imposition of a certain class who are able, but unwilling, to pay for medical services, and who deliberately misrepresent their circumstances in order to obtain advice and treatment free.

The following gentlemen constitute the Board of Trustees: Rev. John Potts, D.D., President; J. J. Foy, Q.C., M.P.P., Vice-President; Warring Kennedy, Esq., Secretary-Treasurer; Rev. Frank Ryan, rector of St. Michael's Cathedral, His Honor Judge McDougall, Lieut.-Col. John I. Davidson and Rev. John Gillespie, rector Church of the Messiah.

YUKON PHYSICIANS AND SURGEONS.

The establishment of a Yukon College of Physicians and Surgeons and the election of a council for the same, has taken place. There were some twenty-five Canadian practitioners in Dawson and vicinity, and a number of American physicians who were practising in spite of the North-West Territories' Ordinance. The Canadians found it necessary to incorporate themselves into a legal body for the purpose of protection and mutual help.

At the election held on the 5th of October, 1898, the following gentlemen were elected members of the Council of the College of Physicians and Surgeons of the Yukon Territory: President, E. D. Dunn; Vice-President, R. R. Macfarlane; Registrar, A. F. Edwards; and J. W. Good and H. H. Hurdman.

The first examination was announced for October 15th, 1898; and the following examiners were appointed: Surgery—J. W. Good and E. L. Barratt; Medicine—R. R. Macfarlane and E. G. Scott; Midwifery and Gynecology—E. P. Thompson and W. G. Hepworth; Medical Jurisprudence and Sanitary Science—J. A. Sutherland and W. A. Richardson.

Since the Ordinance assented to by the Executive Council, an amendment has been added which allows all *bona fide* medical practitioners, practising in the Yukon Territory at the date of the establishment of the College of Physicians and Surgeons, who were able to produce certificates of having attended a medical college for three years and a diploma of qualification from the same, to be eligible for admission to the College of Physicians and Surgeons upon passing an examination and paying one hundred dollars to the Registrar. This amendment holds good only until the close of the first examination.

As it now stands the regulation with reference to the practice of medicine in the Yukon Territory is, in brief, that (1) licentiates of Quebec, Manitoba and the North-West Territories are eligible to practise medicine in the Yukon Territory on the presentation of their licenses and the payment of a fee of one hundred dollars. (2) Those who can present certificates of attendance for four years, or a diploma of qualification from a recognized school of medicine, are eligible to practise in the Yukon Territory, upon passing the examination of the Medical Council of the Territory and the payment of one hundred dollars to the Registrar. J. N. E. B.

TREATMENT OF INEBRIATES.

Dr. Rosebrugh's recent paper on the treatment of inebriates suggests a very practical plan for the immediate care and treatment of acute inebriates. An alcoholic ward, in city and local hospitals, where restraint and medicine can be used, would show to the public the practical nature of such efforts, in the cure and prevention of a certain number of cases. This would be a simple,

inexpensive way of proving the value of medical treatment, and would soon create a demand for a farm hospital. We commend this plan to our Canadian friends as the beginning of a most practical work.

It is certainly encouraging to hear the greatest criminologist of the day give it as his opinion that "the world is not going down hill. 'No, mankind is getting better rather than worse." Such is the conviction of Prof. Cesare Lombroso, the illustrious Italian who has made criminology a life-study. His wonderful prophetic knowledge of criminals and his strength of character are illustrated by the position he took in 1879, in the case of the crazy cook, Passanante, who attempted the life of King Humbert in Naples. Lombroso held that the assassin was driven to his deed by the suggestions of a diseased imagination.

"'Kill him!' cried the multitude. 'Away with him to punishment!' echoed the authorities. 'No!' said Lombroso, 'send him to an insane asylum, for he is mad.' Instantly there arose a storm of denunciation against the man who dared suggest that the assailant of the king should escape punishment. Experts, so called, were not lacking to testify that Passanante was perfectly sane and completely responsible for his acts. Lombroso was aroused. With perfect coolness and unanswerable logic he pointed out the errors of the experts, insisted that the criminal was not responsible for his act, and that he ought to be corrected, not punished. Passanante, he said, was suffering from a particular form of insanity known as the '*folie de persecution.*' But no one would listen to him. All over Italy he was violently attacked, denounced as an enemy of mankind, ridiculed, laughed at, and cried down. They sent Passanante to a dungeon. Thirteen years later, when the storm had blown over, a commission of alienists examined the prisoner, found that Lombroso was right, pronounced Passanante a lunatic, and sent him where he should have gone in the first place, to an asylum."—*Journal of Inebriety, October, 1898.*

Dr. Stanley Kent, of London, England, has, it is said, discovered a vaccine germ. This discovery is of the greatest importance, as its use in pure cultures removes the impure lymph, which has been the cause of the widespread objection in vaccination.

The Physician's Library.

BOOK REVIEWS.

A System of Medicine by Many Writers. Edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D., LL.D., F.R.C.P., F.R.S., F.L.S., F.S.A., Regius Professor of Physic in the University of Cambridge; Fellow of Gonville and Caius College. Vol. V. London: Macmillan & Co., Limited, 1898. Toronto: A. P. Watts & Co., 10 College Street.

This volume was to have appeared just a year ago; but the editor, though every other part of his volume was ready for press some weeks before Christmas of 1897, was delayed and kept back very much owing to have to wait for the report of the Vaccination Commission. Therefore it is but fair to the authors of the different sections to say that it is on this account that their contributions do not perhaps come just as near the mark as they might, as they were not given the opportunity of revising their work which had stood in type for so long a time. Dr. Welch, whose contribution to this volume on "Thrombosis and Embolism," would have been so much appreciated, had to be held over, owing to the author having had his time fully occupied, as President of the Congress of American Physicians and Surgeons, fighting "an iniquitous bill then before Congress, which sought to restrict medical research to a degree never before attempted." Dr. Allbutt intended to have included in this volume Diseases of the Arteries, but on Prof. Welch's account has postponed that section until Vol. VI. Vol. V. is devoted to Diseases of the Respiratory and Circulatory Systems. The former section is divided into two classes, Diseases of the Respiratory Systems Proper and Diseases of the Pleura. Under the first subdivision, Dr. Wm. Ewart treats of Bronchitis and Bronchiectasis; Dr. P. H. Pye Smith, of Pneumonia; Dr. Percy Kidd, of Phthisis Pulmonalis; Dr. J. T. Arlidge, of Pneumoconiosis; Dr. Rolleston, of Pulmonary Aspergillosis; Dr. Kingston Fowler, of Emphysema and Syphilitic Disease of the Lungs; and Dr. Jas. F. Goodhart, of Asthma and Hay Fever. Under Diseases of the Pleura, Dr. Samuel West contributes an article on Intrapleural Tension, Dr. Gee and Dr. Herringham one on Pleurisy, and Dr. D. W. Finlay one on Pneumothorax. Under the second section, that devoted to Diseases of the Circulatory System, the principal writers are Prof. Michael Foster, who has an article on General Features of the Blood, Dr. Moncton Copeman on (1) Methods of Clinical Examination of the Blood and (2) Hæmoglobinuria. Prof. Allbutt contributes several chapters, one on Chlorosis, on Functional Disorders of the Heart, on Mechanical Strain of the Heart, and a fourth on Disease of the Aortic Area of the Heart. Sir Douglas Powell writes on Diseases of the Myocardium, Dr. Cheadle on Infantile Scurvy, while other contributions are written by men who stand very high in the profession. Better late than never, but, though late, the volume is a daisy, and compares well with any one of the other four.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology and Dermatology, and specially prepared articles on Treatment and Drugs, by professors and lecturers in the leading medical colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by JUDSON DALAND, M.D., University of Pennsylvania, Philadelphia; J. MITCHELL BRUCE, M.D., F.R.C.P. (Lond.), Eng.; and D. W. FINLAY, M.D., F.R.C.P. Volume III., Eighth Series, October, 1898. Philadelphia: J. B. Lippincott Co. Montreal: C. Roberts, 593A Cadieux Street.

We find among the list of contributors to Volume III. of International Clinics such men as Drs. Alex. McPhedran, of Toronto; J. C. Webster, of

McGill University ; Thomas H. Manley, New York ; Paul F. Mundé, of Mount Sinai Hospital ; Sir Dyce Duckworth, of London ; John B. Hamilton, Chicago ; Harold N. Moyer, Chicago ; T. Lauder Brunton, of London ; and many others almost as well known. The first chapter is on "Drugs and Remedial Agents," under which heading Dr. H. M. Bracken, Professor of Therapeutics in the University of Minnesota, treats of "The Therapeutic Use of Alcohol." Under the head of "Treatment," we have several good and most readable articles, the one by Dr. J. C. Webster, on "Some Observations Regarding the Treatment of the Conditions Generally Known as 'Anteversion' and 'Anteflexion,'" being well worthy of perusal. Under the heading of "Medicine," the articles are contributed by such men as Drs. Lauder Brunton, Alex. James, Joseph A. Mullens, Graham Steel, T. H. Stucky, and others. Dr. Alex. McPhedran, of Toronto, whose article on "Sporadic Cretinism in Ontario," produced in our last issue, has called forth such widespread encomiums, contributes a chapter of special worth on "Peripheral Neuritis," in which the subject is treated in a most masterly manner. Dr. T. H. Manley, of New York, whose contributions to this journal for the past few years have been so acceptable, has an article entitled "Secondary Hæmorrhage," appearing under "Surgery." This contribution is written in the usual clear and lucid manner of the author. Vol. III. is fully up to, if not beyond, the standard of Clinics, and the publishers are to be congratulated on it in every way.

Human Anatomy. A complete systematic treatise by various authors, including a special section on "Surgical and Typographical Anatomy." Edited by Henry Morris, M.A., M.B., London, Senior Surgeon to Middlesex Hospital ; Examiner in Surgery to the University of London ; Member of the Council and Chairman of the Court of Examiners of the Royal College of Surgeons of England, etc , etc. Illustrated by 790 wood cuts, the greater part of which are original and made expressly for this work by special artists—over two hundred printed in colors. Second edition, revised and enlarged. Philadelphia : P. Blakiston's Son & Co., 1012 Walnut Street. 1898.

It is but five years or thereabouts since the first edition of Morris' Anatomy was published, but during that time it has come to occupy, in the opinion of teachers of anatomy, a very high position, till to-day it is quoted as the foremost work on the subject, and is used in nearly all the schools and universities. It is a pleasure to glance over the book, the illustrations alone being almost sufficient to teach the reader his anatomy, so clear and distinct are they, standing out in two colors. In the section on osteology, the illustrations of the bones are made to show the origin and insertion of the muscles and the attachment of ligaments in red, blue and black lines. The reason that we say that the illustrations are specially good and helpful to the student without necessitating his wading through several pages of text, is that the method of describing the illustrations is particularly simple and helpful. The descriptions of each illustration are printed at the end of pointers, that of muscles and ligaments being in one kind of type, arteries and veins in another, bones in a third and nerves in a fourth. To the second edition of the work Mr. Anderson has added a description of the skin, with at the end of the volume a chapter on Vestigial and Abnormal Structures. This book is a magnificent presentation of "The Anatomy of the Human Body," presented in a most complete form, and illustrated in a manner which is a credit to those who had the compiling of the different sections in charge.

A Text-Book of Pathology. By Alfred Stengel, M.D., Instructor of Clinical Medicine in the University of Pennsylvania ; Professor of Clinical Medicine in the Woman's Medical College ; Physician to the Philadelphia Hospital ; Physician to the Children's Hospital, Philadelphia, etc.; with 372 illustrations. Philadelphia : W. B. Saunders, 1898. Toronto : J. A. Carveth & Co. Cloth, $4 net. Half morocco, $5 net.

The chief point of excellence in Dr. Stengel's work is that it originated in

demonstrations upon clinical pathology for students of medicine. It is for that reason thoroughly practical, something very much lacking in books on pathology which have been published up till the present. Too few of the works referred to pay the necessary amount of attention to pathologic physiology, but, on the other hand, devote too much space altogether to matter dealt with fully in books on technique. In this work the author has cut out everything not essentially practical, having excluded the pathology of the skin, and of the organs of special sense. One of the most complete chapters is that on "Diseases of the Respiratory System." The illustrations of the sputum in cases of asthma, acute congestion of the lungs, phagocytic cells of the sputum containing blood pigment, hæmorrhagic infarction of the lung, are among the best executed we have ever seen in any work. The colored plate on page 537, on "Cirrhotic Cancer of the Liver," is most delicate and perfect. Such illustrations, so finely reproduced, add immensely to the value as well as the interest of any work. Dr. Stengel's work is well-nigh complete, and should be on the shelves of every physician's library.

Practical Uranalysis and Urinary Diagnosis. A manual for the use of physicians, Surgeons and students. By CHARLES W. PURDY, M.D., LL.D., Queen's University; Fellow of the Royal College of Physicians and Surgeons, Kingston; Professor of Clinical Medicine at the Chicago Post-Graduate Medical School; author of "Bright's Disease and Allied Affections of the Kidneys;" also of "Diabetes; Its Causes, Symptoms and Treatment." Fourth edition, revised, with numerous illustrations, including photo-engravings and colored plates. Philadelphia, New York and Chicago: The F. A. Davis Co., publishers, 1898.

It must be a most encouraging thing to any author to be called upon to rewrite a book four times inside of three years, so large a sale has there been for it. It seems but a very short time since we had the pleasure of reviewing the third edition of Purdy's "Practical Uranalysis." This work has been adopted as text-book in between fifty and sixty medical colleges of the United States, which in itself goes to prove its value. Nowadays, when life insurance examination has come to be so important and responsible a part of a physician's duties, when so much care has to be used in pronouncing upon the expectation of life in any particular individual, it is absolutely essential that the best work, and the one containing the most recent information regarding urinary examination, should be in the possession of every medical practitioner. We know of no book which pays so much attention to this as Dr. Purdy's, and especially so in this, his latest edition, in which he has rewritten, and considerably added to this particular and vastly important subject.

The Care of the Baby. A manual for mothers and nurses, containing practical directions for the management of infancy and childhood in health and in disease. By J. P. CROZER GRIFFITH, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Physician to the Children's Hospital, to the Methodist Episcopal Hospital, and to St. Agnes' Hospital, Philadelphia, etc., etc. Second edition, revised. Philadelphia: W. B. Saunders, 1898. Toronto: J. A. Carveth & Co.

Though at first sight it might appear to some that a book of this kind, and dealing with this subject, might have a tendency, after reaching the hands of the laity, to rob the physician of cases which otherwise should come under his care, yet we are inclined to think, on the other hand, that the facts taught by Dr. Griffith will have the effect of inculcating into the minds of mothers, as a class, the importance of calling in the family physician earlier and more frequently in cases of what may appear to them trifling ailments among babies. Dr. Griffith has given in his book a category as to the treatment of the mother during gestation, and then goes on to discuss the child itself, its growth, feeding, sleeping, toilet, exercise, etc. The work will be a useful one for mothers and nurses, as also for medical students.

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Original Contributions.

THE MODERN TREATMENT OF TETANUS.

BY J. J. CASSIDY, M.D.

A SURGEON who had to treat a case of tetanus, say, ten or twelve years ago, found his operative measures rather restricted. Perfect cleanliness and even antiseptic dressings for an open wound: the removal of any foreign substance which might have entered the tissues at the time of the accident; an incision to remove an accumulation of pus; the stretching of the nerve leading to the wound, or possibly the amputation of the injured part would represent the surgical treatment.

In Ranney's "Lectures on Nervous Diseases, 1888," Hammond, who analyzed the results of treatment by drugs and surgical procedures in typical cases of tetanus, is quoted as saying, that "some of the cases apparently recover, rather in spite of drugs than by their direct aid. He thought that large doses of chloral, combined with large doses of bromide of potassium, give as much relief to the patient as any known treatment. The application of ice-bags to the spine, combined with the internal administration of half a grain of the extract of cannabis indica, every two hours, may be attended with good results." Ranney also advises that the patient should be placed in a darkened and quiet room, and every precaution should be taken to avoid a recurrence of the paroxysms. The patient may often be nourished by means of a tube passed behind the last molar tooth, and through the pharynx into the stomach, or may be put under the influence of an anesthetic and a tube introduced between the teeth, or, when that is impossible, through the nostril into the stomach.

Ever since the discovery of the microbe of tetanus by Nicolaier in 1884, experimental work has been done in the laboratories to ascertain the mode of attack which it pursues in the animal economy; and it appears that this microbe does not spread in the body, but elaborates, in the injured part, toxins, which it diffuses through the general circulation.

This explanation being accepted, we see the necessity of the primary cleansing of a soiled wound, and the still greater necessity of keeping it dry, in order to prevent the decomposition of the wound secretions, which render possible the extensive formation and subsequent absorption of toxins. This may also be the reason why amputation of the wounded part proves curative of tetanus by removing the seat of toxin formation; and it may also account for the curative results obtained in tetanus by hypodermic injections of phenol at the seat of injury.

At the regular meeting of the Society of Surgery of Paris, November 16th 1898 (*La Presse Medicale*), Dr. Hue, of Rouen, reported the case of a boy, aged eleven years, who developed tetanus six days after receiving a compound fracture of the wrist from a fall. An intra-cerebral injection of the anti-tetanic serum was given, but the patient died in twenty-four hours. Dr. Quenu reported two cases of intra-cerebral injection of anti-tetanic serum followed by death. Dr. Lucas-Championière reported two cases of this treatment followed by death. In a third case an intra-cerebral injection had been given to a patient affected with incomplete tetanus for eight days; the patient recovered, but it was a case of chronic tetanus. Recently, he had been informed by a surgeon who often sees cases of tetanus in his practice, that of seven cases occurring in one year, four recovered spontaneously. Consequently, in appreciating the facts, it should not be forgotten that tetanus, especially in the chronic form, terminates in recovery, in spite of and influenced by treatment. Dr. Chaput reported a case of intra-cerebral injection, followed by death. Dr. Richelot reported a similar failure. Dr. Hartmann also reported a failure.

November 23rd, Dr. Reclus read to the same Surgical Society two observations sent on by Dr. Bousquet. In one, in spite of intra-cerebral injection of anti-tetanic serum and the amputation of a finger—the cause of infection—the patient died during the day. In the other case, treated by chloral and subcutaneous injections of serum, the patient recovered. Dr. Beurnier reported that in a case of tetanus he had punctured the spinal canal in the lumbar region, removing 40 grammes of cerebro-spinal fluid and injecting by the same route anti-tetanic serum, afterwards injecting 8 grammes of serum into the frontal lobes of the brain. The patient died, and the autopsy revealed no important facts.

November 30th, Dr. Michaux reported to the same Surgical Society a case occurring in the practice of Dr. Veslin, in which tetanus was treated by intra-cerebral injections of anti-tetanic serum, and unsuccessfully.

December 7th, Dr. H. Folet reported to the same Surgical Society the following case: A carter, as a result of crushing of the legs, developed tetanus. Dr. Folet removed a button of bone at the antero-internal angle of the parietal bones, and injected on each side 5 cc. of the anti-tetanic serum to a depth of 5 cc. into each hemisphere of the patient's brain. The patient died during the night.

In the *Lancet*, September 24th, 1898, David Sime reported a case of tetanus occurring in a young man who, July 2nd, fell down on the ground in a farm-yard and injured the skin over the right hypothenar eminence. The wound was washed and healed rapidly. Eleven days later, July 13th, symptoms of tetanus appeared. He received, by subcutaneous injection, 10 cc. of anti-tetanic serum, July 20th and 21st, and July 22nd, he presented a scarlatiniform rash with fever. The general phenomena quieted down after July 24th, and August 1st he recovered. In reference to this case it must be remarked, that Sime's patient took large doses of chloral, bromide of potassium and cannabis indica. In such a case it is difficult to prove the value of the anti-tetanic serum. Sime thinks, however, that the anti-tetanic serum arrested the steady advance of the tetanic poison. He concludes, that this serum ought to be injected as soon as the diagnosis of tetanus is made, and also, that it should be employed preventively every time that a wound is soiled with earth, especially the earth of a farm-yard, or manure, etc.

In *Le Progrès Medical*, December 3rd, 1898, Dr. H. de Rothschild reports a case of tetanus in a man of forty, who, July 28th, had been wounded in the forearm by the bursting of a gun. Not wishing to amputate, Dr. de Rothschild had the wound carefully bathed with bichloride solution, July 30th. To counteract the tetanic poison he employed (*a*) bleeding, which eliminates a certain quantity of the toxin; (*b*) injections of Hayem's artificial serum to cleanse the blood: (*c*) injections of Roux's anti-tetanic serum to neutralize the toxin in the circulation; (*d*) chloral and bromide of potassium, to diminish the erethism of the nervous centres; (*e*) every second day. to overcome secondary infections, the arm was bathed in a solution of permanganate of potash. This treatment seems to be logical, for, as de Rothschild says: (1) The tetanic bacillus is localized in the wound, where it elaborates a toxin; (2) in order that the anerobic bacillus of Nicolaier may cause tetanus, it must be associated with other microbes; (3) the toxin of this bacillus diffuses itself through the blood; (4) the toxin, which it generates, attacks the nerve centres and causes an erethism, which sometimes becomes continuous. The patient recovered, a favorable turn having occurred on the night of August 14th.

In *Riforma Medica*, No. 62, p. 734, 1896, Dr. Sbrana reports a case of tetanus cured by the Baccelli treatment. An Arab, twenty-five years of age, while carrying a load of earth, struck the great toe of his left foot against a rock, causing a wound. By the

advice of a comrade, he wrapped some cobweb around the wounded part and then covered it with earth. Two or three days afterwards, finding the wound painful, he removed the cobweb and noticed that the wound had an unhealthy look. Again taking unskilled advice, he washed the wound with urine and covered it with lime. Twelve days after the accident he had difficulty in walking, and noticed that the injured toe and the rest of the foot were full of little punctures. These symptoms increased, and three days after a regular attack of traumatic tetanus supervened. When Dr. Sbrana saw the patient he observed the following phenomena: Complete trismus, risus sardonicus, dysphagia, difficulty in breathing and in speaking, opisthotonos and complete rigidity of the muscles of the back and extremities. That evening Dr. Sbrana gave a hypodermic injection of phenic acid, 2 per cent., at the root of the injured toe, and next day he resected the necrosed phalanx. He continued to give three injections of phenic acid per diem. Three days after the operation the temperature returned to the normal (it had reached 38° C.—101.5° F.), and the symptoms of tetanus, especially the trismus, were favorably modified; the patient could open his mouth so that the forefinger could be placed between the teeth. After sixteen days' treatment the patient was cured. Dr. Sbrana remarked that, in this case, as well as the three others he had treated, the infection came from the ground, and that the agent that transmitted the microbe was evidently the cobweb. With regard to the injections of phenol, one cannot in this particular case neglect to note the curative influence of the rapid resection of the injured phalanx.

Dr. G. Ziengo, in *Gazzetta degli Ospedali et delle Cliniche*, October 9th, 1898, reports a case of tetanus following a complicated fracture in a man fifty-two years of age, and four days later tetanus was developed. Eight days after the first symptoms appeared Baccelli's treatment was begun, large doses of a 3 per cent. solution of phenol in distilled water being injected. As no symptoms of intolerance appeared, the daily dose of phenol was raised from 30 to 50 centigrammes and kept at that figure. With the exception of a little albuminuria no symptoms of poisoning were observed. In all 978 centigrammes of phenol were injected hypodermically during twenty-seven days. At first a daily dose of from 4 to 6 centigrammes of morphine was associated with the phenol, to relieve the insomnia and hyperesthesia which accompany the tetanic disease; but the morphine was soon laid aside, as the phenol appeared to answer all the indications. About the third day there was a slight amelioration of the patient's condition; nine days later the trismus disappeared, and on the twenty-third day the cure might be considered as certain.

This is the thirty-second case of tetanus treated by Baccelli's method of hypodermic injections of phenol. One death occurred out of the thirty-two cases, which is a grand result when one remembers that the general mortality of patients affected with tetanus is 70 per cent.

Dillon Carberry, writing in the *Therapeutic Gazette*, says: "The use of phenic acid in cases of tetanus, devised by Baccelli some years ago, has many upholders here (Rome). Dr. Ascolj, at a late meeting of the Royal Academy of Medicine, made an astonishing comparison between the relative values of the serum of Behring and Tizzoni, and the cure by phenic acid. The cases so far reported give the following results:

Treatment by Tizzoni's serum, died, 8 in 40;
Treatment by No. 1 Behring serum, died, 4 in 40;
Treatment by No. 2 Behring serum, died, 2 in 9;
Treatment by phenic acid, died, 1 in 32,

leaving a considerable balance in favor of the carbolic treatment.

There is a great tolerance for the drug in tetanus; the use of large doses is indicated. For subcutaneous injection a 3 per cent. solution is used; the dose varies from one-half to ten grains. The maximum dose for the twenty-four hours seems to be forty-five grains. Local baths may also be used with advantage.

SHOULD THE DEFORMITY IN POTT'S DISEASE BE FORCIBLY CORRECTED?*

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No subject in surgery has excited more widespread interest during the past two years than the forcible reduction of the deformity in Pott's disease. So much has been said and written on the subject and so many times has the operation been performed in various parts of the world that experiences, facts and opinions are now available in sufficient abundance to enable each surgeon to decide at least what his own attitude in relation to this operation shall be until its true status has been more definitely determined by observation of the ultimate results in cases already operated upon.

The history of forcible reduction of spinal deformity is full of interest, but cannot be more than referred to here. In the writings of Hippocrates, 500 B.C., forcible reduction of spinal deformity is spoken of as an old practice, and several methods of performing it are described; while in 1647, Ambrose Paré described a procedure which is surprisingly similar to the method employed by Calot. Although the revival of this practice is inseparably associated with the name of Calot, priority in the modern use of this method belongs to Chipault.

Outside of France, Robert Jones, of Liverpool, was one of the first to adopt Calot's method. He thus describes the method of performing it:

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* Read before the Toronto Medical Society, January 12th, 1899.

"Having determined to forcibly reduce the deformity in a case of Pott's disease, it is necessary to carefully prepare our patient, more especially if the plaster corset recommended by Calot be applied. For two or three days previously the patient should be dieted with a view to supplying nourishment and avoiding waste concretions. The bowels should be thoroughly well opened, so that if necessary abdominal pressure may be applied by the hand without risk; and for the same reason the bladder should be empty. It is hardly necessary to state that the skin should be deodorized and disinfected, and that the head should be shaved. In order to avoid insect life the scalp should be treated for a sufficient time. An assistant should now prepare the traction bandage. This consists of two linen bands a yard long. The centre of one piece is placed round the occiput, the centre of the other round the chin. They meet beneath the ear on each side, and at this point are firmly fixed with safety-pins. The free ends are knotted, and an assistant takes a loop in each hand, or more conveniently, the loops may be attached to a crossbar of wood or other material. The linen bands must be of equal length, otherwise the head is not pulled in line with the spine. They should be fully a yard long in order that the assistant who controls the head may be well out of the way of the anesthetist. This traction is quite essential, as one cannot act upon the spine by manual grasp upon the head for any length of time. In addition to the assistant who controls the head, six others are needed: two for the arms, two for the legs, one for chloroform, and one to directly assist the operating surgeon. Chloroform having been administered, at a given signal traction must be exercised. If the patient be small he need not be supported by chest or pelvic rack. A child of two and a half years requires a pull of 220 kilos before the neck is dislocated. Traction, therefore, measured if necessary by the dynamometer, should be well within that strength. Roughly speaking, five men, pulling with a force that soon tires, rarely exceed 70 kilos, so that the danger of dislocation is very slight. All, however, should pull together, and there should be no jerk. This applies more especially to the assistant who controls the head. Simple traction will reduce the deformity in a large number of cases, particularly in curvatures situated high up. If it does not, direct pressure must be applied to the hump. An assistant places his hand upon the abdomen with sufficient power to feel the bodies of vertebræ, and it is to anticipate this pressure that I have advised a careful diet and an empty bowel. This pressure on the vertebræ from the front is a check upon the surgeon who presses directly upon the hump, and who uses sufficient force to reduce the deformity, if he can do so with safety. In a large number of cases the pressure required is very great, and sometimes the reduction is accompanied by crackling heard all over the theatre. In very early curves only is reduction absolutely complete—by this I mean that no trace of thickening remains In the more mature deformities the curve is

reduced by fully three-fourths its bulk, either in one, two or three sittings. I think it is prudent in the case of very pronounced curves to reduce them in two or three stages, rather than at one sitting. This is more especially the case if the effort be accompanied by much crackling, or if there be much resistance. . . . The plaster corset of Calot is applied in the following manner: The surgeon places an assistant to keep up pressure on the lately prominent vertebræ. This pressure is to be maintained during the application and drying of the plaster corset. Strips of wadding are placed to interlace one another at the level of deformity; then the chest, abdomen and head are covered by cotton-wadding bandages to the thickness of about an inch. Plaster bandages are then rolled round and so arranged as to make powerful compression upon the deformity, extension to the spine being kept up during this time. The bandages should be soaked in hot water to ensure their drying rapidly. In order to complete the cervical and cranial part of the apparatus one can leave the child in the horizontal position, but it is simpler to effect whilst the child is suspended with the head erect on the ordinary apparatus. The child, therefore, hangs by suspension strips, which I have described, whilst the surgeon rolls the plaster bandages around the neck and head, only leaving the face exposed from the eyebrows to the chin."

Various modifications of the original operation above described have been proposed and adopted, but the mechanical principle underlying all is essentially the same: while traction and counter-traction are made on the spine pressure is exerted upon the hump until it yields and the deformity is diminished or obliterated; some retentive dressing or appliance is then put on. It is not matter for wonder that the first reports of this operation were received by most surgeons with incredulity if not positive scepticism, for strong theoretical objections can be urged against it. In spinal caries the deformity is an incident, not the essential feature, an incident moreover of Nature's method of effecting a cure. The gap left anterior to the kyphos by the tearing apart of the collapsed vertebræ might not fill in with bone, and if this proved to be true the operation would be worse than useless. The risks of causing paralysis, of rupturing existing abscesses or helping to create new ones, of injuring the large blood-vessels lying upon the front of the spine, of increasing the activity of existing disease or lighting it up afresh when quiescent, and the danger of causing a dissemination of tubercle could not be forgotten.

Experience has demonstrated, however, that at least some of these theoretical dangers have little or no real foundation; for forcible correction of the deformity in Pott's disease has now been done hundreds of times, and observers are pretty well agreed that the operation is usually easy of performance and practically free from immediate danger.

This being the case it would seem that the operation has much to recommend it. For esthetic reasons alone it is desirable to cure

deformity in any part of the body, and in none more than in the spine; for the unsightly hump and the dwarfed stature which result from severe Pott's disease are probably more humiliating than anyone except the patients themselves realize. But still more important is the preservation of the normal shape and capacity of the thoracic and abdominal cavities with their important contents, for notwithstanding Nature's marvellous power of adaptation to changed conditions, it is impossible not to feel that the cramped and distorted trunk, which results from extensive caries of the dorsal or lumbar spine, places the important viscera of the thorax and abdomen at a serious disadvantage. Nor is this all, for it has been fully demonstrated by Goldthwait, Calot and others, that the paralysis which is not infrequently a serious complication of Pott's disease, is often immediately improved by the correction of the deformity.

Having endeavored to view impartially the advantages claimed for this method of treatment, let us now examine the difficulties, doubts and dangers that attend it. And the first point to be noted is that in carefully following the literature of this subject one cannot fail to be struck with the fact that other surgeons have been much less fortunate and are not nearly as enthusiastic as the optimistic Calot. At the International Medical Congress in 1897, Calot, of Berck-sur-mer, reported 204 cases. Of these, two children died within a few days after the operation, and three others within three or four months. Of the latter, one died of broncho-pneumonia, the other two from meningitis. In one case paralysis supervened a fortnight after the operation. Of eight paralyzed at the time of operation, six recovered from the paralysis within ten days, but the others remained unrelieved. Jonnesco reported three deaths in thirteen reductions—one death was caused by chloroform, one from broncho-pneumonia after eight days, and in one case the autopsy, forty-eight hours after the operation, failed to reveal the cause of death. Vulpins reported a death within forty-eight hours of the operation. Sherman, of San Francisco, has done the operation three times. Two of the patients died within a few months, and the other was, at the time of writing, in a hopeless condition, having since the operation developed a tremendous abscess which was discharging freely in the neck. Menard reported one death from the rupture of an abscess. Lorenz reports the production of paralysis by forcible reduction. Malherbe reports the fracture of a spine. Jones reports two deaths in fifty-two operations. Peckham reports a case in which for two or three days following reduction there was shock so severe that the patient seemed at the point of death.

In the light of these various experiences we are not disposed to wonder at M. Monad's opinion that Calot's statistics are too good and consequently carry little weight.

Further, these published results by different observers show that a number of the patients operated upon die within a period

varying from a few days to three or four months: also, that as an immediate result of the operation we may have death from chloroform, paralysis, rupture of abscess, fracture of the spine and dangerous shock—an array of possible accidents sufficient to at least indicate the need of caution in approaching this operation. Still it must be admitted that the risk is relatively small, and we would be quite justified in assuming it in properly selected cases if we could feel assured that an ultimate good recovery without deformity, or with greatly diminished deformity, might reasonably be expected.

But will such recovery take place? We have no satisfactory evidence that it will, while many of us have the gravest doubt of its probability. These misgivings will be readily understood if the conditions present after the forcible reduction are calmly considered. The hump of Pott's disease exists because the bodies of one or more vertebræ in front of it have collapsed and disappeared, partly or entirely, as a result of the disease. By the operation of forcible reduction the remnants of these diseased vertebræ are violently separated, and a gap is left into which more or less hemorrhage will occur or which may possibly fill up with the contents of a ruptured abscess. Tuberculous material which Nature had encapsulated, is set free, and fresh surfaces are opened up for absorption. The best compensation which Nature could make for the disappearance of the vertebral bodies was to cement the remnants solidly together, but by our operation of forcible reduction we undo her conservative work, create a gap, and leave the affected bones to rest merely on their articular and transverse processes. As has been shown, however, the risk of harm resulting directly from the traumatism is surprisingly small. Moreover, it is quite possible that the intercurrent pneumonia which has been the cause of death in some of the cases two or three months after reduction, might have occurred independently of the operation. And the same may be said of the tuberculous meningitis which has sometimes followed, for this affection occasionally occurs in connection with tuberculosis of bones and joints, aside altogether from operative interference; consequently the danger of disseminating tubercle by the operation should not be allowed undue weight. If, therefore, we knew that the gap created by the reduction would fill in with new bone and leave the spine straight and strong, much good would be gained, and we would not hesitate to advise this plan of treatment in suitable cases. But we have as yet no reliable evidence that such genesis of new bone will take place, and our knowledge of the behavior of tuberculous does not lead us to expect it.

"The immediate results . . . are so strikingly satisfactory that the ultimate condition of the patients is apt to be overlooked, and in the first enthusiasm over the operation the exact pathology of the disease seems to have been forgotten. Certain it is that the deformity can be reduced in a large number of cases, but the

fact remains that the cause of the deformity is the destruction of a considerable portion of one or more vertebræ as the result of tubercular disease. It is also well known that bone repair in this disease takes place much more slowly and less completely than in the other forms of bone disease. Also, it is well known that the reparative process in the bone can take place only after the tubercular granulations have been absorbed, a matter always involving many months or years; and what is also an important factor, is that, as *the bone-forming elements have been so largely destroyed by the disease, the amount of new bone formed must be slight and wholly inadequate to fill the large gap that would be left after the treatment of the severe cases.* Claims have been made that bone repair has taken place very rapidly after the operation, and Calot and Ducroquet both present radiographs which are intended to prove this. The reproductions from these, however, are very far from satisfying, and one must be decidedly doubtful when it is realized that *all of the pathological material which it has been possible to study shows little, if any, attempt at the formation of new bone.* As tuberculosis of the spine is not essentially dissimilar from tuberculosis of the other bones and joints, and as the pathological condition found in the specimens which have been examined is entirely similar to the condition found after like treatment in other joints, it is probable and reasonable to suppose that the process of bone repair has not been radically changed by mere forcible straightening of the spine." (The italics in the above quotation are mine.)

As bearing upon this question of repair following the operation, a brief but very valuable paper has been contributed by Murray, of Liverpool. He reports two cases in which death occurred two and three months respectively after the operation, in both of which an autopsy was made. Very clear photographic illustrations of the *post-mortem* appearances accompany the paper. In the first place the spine was forcibly straightened on September 17th, and the child died on November 7th of pneumonia. The autopsy showed that "the disease had involved three of the dorsal vertebræ, completely destroying one of them. There was not the slightest evidence of repair, but the gap formed by the forcible straightening had resolved itself into a false joint bounded by caseous and diseased tissue." In the second case the spine was forcibly straightened on August 20th, and the child died on November 15th from tuberculous meningitis. After death the spine was found to be very "wobbly" at the seat of the disease. "Though the child had been kept lying since the operation—that is, for three months—there was not the least evidence of repair, nor any attempt at the filling-in of the gap." In a paper read before the American Orthopedic Association last May, Ridlon, of Chicago, reported that he had attempted forcible reduction in Pott's disease sixteen times. He says: "In no case do I think I have obtained reliable bony solidification at the point of disease."

Even Calot evidently expects trouble in many cases in the way of insufficient consolidation of the spine after correction, and also from recurrence of the deformity. For in a discussion at a meeting of the Clinical Society of London on November 12th, 1897, Calot said that "if, after the end of four or five months, the consolidation of the spine was unsatisfactory, it was desirable to perform an operation to promote ankylosis. This was done by denuding the laminæ at the parts where they were in contact, applying the periosteum over the site of the proposed junction." He further stated that if recurrence took place he should advise artificial union; "indeed he was almost disposed to recommend this procedure as a routine practice, as a prophylactic."

Further evidence of the lack of post-operative repair of the gap created by forcible straightening is afforded by the testimony of various observers to the marked tendency of the deformity to relapse. Chipault, the predecessor of Calot in the operation of forcible reduction, says there are many relapses, and that unless the apophyses are wired together, practically all will relapse.

Goldthwait says: "Unless the after-treatment is carried on most patiently and intelligently for years afterward, certain it is that the ultimate results will be as disappointing as the first results have been gratifying, and that relapse will be the rule. Already relapses have been reported by Pean, Phocas Tansch, Lorenz and Vincent; and many others must follow, if a few months' after-treatment, as Calot would have us believe, is all that is necessary to accomplish a cure."

In the discussion on this subject, at the last meeting of the American Orthopedic Association, "Dr. A. M. Phelps said that he had forcibly straightened a number of cases of Pott's disease. He believed that every one of them would relapse except those operated upon very early, before a large kyphos had formed." It is hardly necessary to add that if bony repair of the gap created by the operation had occurred, these relapses would not be reported. But even if we could feel assured that early relapse would not take place, we must look for a later return of deformity in a large number of cases operated upon in childhood. It is a matter of common observation that the deformity of Pott's disease often goes on increasing slowly during the growing period, even though the activity of the disease has long ceased. In explanation of this fact Freiberg quotes Hoffa: "It must be assumed that in these cases the inflammatory process has attacked those points from which the growth of the vertebral bodies proceeds, that these latter have lost their ability to grow in comparison with the uninjured vertebral arches, and that on account of the relatively more rapid growth of arches and spinous processes, the size of the gibbus must increase until the close of the growing period. We shall be as little able to prevent the increase of the gibbus under these circumstances as to prevent the abnormal position of a hand in the presence of unequal growth of radius and ulna."

Jones, of Liverpool, who has reported seventy cases, seems to share the general fear that the gap may fail to fill in. With abundant testimony before us of the proneness of the deformity to relapse, confronted by the fact that even if relapse in the ordinary sense did not occur many of the patients operated upon in childhood must still present some deformity by the time adult life shall have been reached, with no pathological proof that repair of the gap has taken place after the operation, and with at least two *post-mortem* specimens, which show that such repair had not even commenced two and three months respectively after the operation—and in one of these specimens the gap was "bounded by caseous and diseased tissue," a condition incompatible with commencing repair—it must be admitted that the doubt pervading the minds of many surgeons regarding the ultimate result in cases treated by this method is not without foundation. To compare this operation, as has been done, to forcible correction of the deformity produced by tubercular disease of the hip or knee, is to try to make diverging lines appear parallel. The anatomy and physiology of the spine are so different from the anatomy and physiology of the hip and knee that forcible correction of the deformity in Pott's disease is not analogous to forcible correction of the deformity in disease of the hip-joint or the knee, except perhaps in regard to the danger of causing dissemination of tubercle by operative intervention, which is probably about equal in all three situations. Beset on the one hand with the enthusiastic endorsation of this operation by Calot and Redard, and encountering on the other hand the distrust of distinguished surgeons who believe that this "improved" method of dealing with Pott's disease is a very doubtful innovation, what is our duty when face to face with the deformity? Personally it has for some months past been perfectly clear to me what course should be pursued, although for a time I was in doubt. I do not hesitate to express the opinion that it is quite unjustifiable to go on doing this operation until the ultimate result in a considerable number of the cases already treated in this way shall have been clearly determined. Hundreds of cases have already been operated upon, but years must elapse before we can be sure whether the operation was a blessing or an unfortunate interference which left the patient worse than before. Until clinical evidence and *post-mortem* findings have demonstrated that satisfactory repair will follow forcible reduction of the deformity, the usefulness of the operation should be held *sub judice*, and we should simply halt, refusing to perform the operation, but neither condemning nor approving it.

Two possible exceptions to this rule should be considered. First, when a case of Pott's disease is complicated by paralysis, which has failed to yield to a fair trial of the usual methods of treatment, the spine should be straightened. Of course it is understood that even under such circumstances any existing contra-indication, such, for example, as the location of the disease in the cervical region,

should be duly considered. There is such unanimity of testimony regarding the favorable effect of this operation on the paralysis of Pott's disease, that it may be quite justifiable to take chances on producing a wobbly spine in the hope of avoiding the ill-results of a complication which may prove to be disastrous if unrelieved. Second: Very early in the disease, where the destruction of bone has been slight and the deformity is consequently small, it may be justifiable to straighten the spine as the first step of the treatment. Even in these early cases, however, it will be found exceedingly difficult, and frequently impossible, to maintain the correction. In regard to the method of performance, Goldthwait's modification of Calot's method appears to the writer much more reasonable than the original operation. The patient is slung in a frame in such a manner that the spine is hyper-extended and the weight of the body is borne chiefly upon the kyphos. Traction is used if required, but frequently the weight of the body suffices to secure a sufficient degree of correction. While still in position on the apparatus the plaster jacket is applied. As a rule no anesthetic is required.

In conclusion it may be said that the tendency toward simplification of the operation, as it is performed by Calot, is evidence that his method of doing it be distrusted, or has been shown by experience to be unnecessarily radical. And while the high expectations raised in some minds by Calot's optimistic reports are doomed to almost certain disappointment, it is generally felt that the outcome of the world-wide discussion of this subject will be some, perhaps considerable, improvement in our management of Pott's disease. Summary:

1. Sufficient experience with the operation of forcible reduction of the deformity in Pott's disease has been accumulated to enable each surgeon to decide whether the procedure is or is not at present justifiable.

2. The theoretical dangers of the operation have not received much support in practice, enough, however, to demand that they be taken into account.

3. Calot reports better results and appears to be more hopeful than any one else.

4. We would be justified in performing the operation if we could be sure of ultimate good recovery without deformity or with greatly diminished deformity.

5. Satisfactory evidence that the ultimate result will be good is wanting, while the *post-mortem* findings quoted are anything but reassuring.

6. Our knowledge of the behavior of tuberculous bone does not make us hopeful regarding the filling in of the gap created by the operation, and the admitted tendency of the deformity to relapse after correction increases doubt on this point.

7. Surgeons should cease performing the operation, and wait patiently until the ultimate results in a considerable number of the

cases already treated have been determined; not condemning the operation in the meantime, but simply holding it *sub judice.*

8. As an exception to the conclusion just stated, cases complicated by paralysis which cannot be cured by other means, should, in the absence of contra-indications, be submitted to forcible reduction, as there is abundant evidence to show that the operation usually cures or improves the paralysis promptly. Very early cases with slight deformity may perhaps also be attempted.

9. The tendency to simplification of the original operation shows distrust for Calot's method, or points to its being unnecessarily radical. The method described by Goldthwait is simpler and more reasonable.

10. As a result of the world-wide discussion of this subject some advance in the treatment of Pott's disease may be anticipated.

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REFLEXES IN PSYCHIATRY.*

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WITHIN the last quarter of a century a large number of the medical profession have taken to so-called specialties. It is doubtful if these subdivisions of practical medicine and surgery are, as a whole, an unmixed good. These specialists are, as a rule, located

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in cities and towns, for, of necessity, the village medical practitioner must yet have a general knowledge of all branches of medicine. As far as diagnosis and surgical operations are concerned in special lines of abnormal conditions, the specialist has that knowledge and those modern appliances necessary to successful treatment. As far as these are concerned, specialists are advantageous to the patients when they do not include too much. Nothing now seems to be left to the general practitioner to try his skill on except the os calcis and the umbilical region.

The result, however, is rivalries and controversy in respect to the merits of the different special branches, in relation to general health and disease.

Any one who takes the trouble to read the reports and monographs of these alienists, gynecologists, ophthalmologists, neurologists, laryngologists, otologists, rectum and bladder-ologists, and so on *ad infinitum*, will notice with what assurance these circumscribed practitioners claim successful treatment of the diseased organ of which they know the most, and as being necessary to ensure generally bodily and mental health. Unconsciously such, of necessity, become one-sided men. The personal equation becomes paramount, and the one domain of their investigation is the all-important object of research and treatment. This is especially true of the young enthusiast, and usually he at last develops into a fanatic and faddist. There is a number of foundation errors which lead to his lopsidedness. The first of these is forgetting that a specialty, to be successful, must be based on a thorough knowledge of the whole human organism in health and disease.

Some one has well said that those deficient in the general knowledge of medicine, although thorough in one particular line of medical research, are like the men who would study comets only, and ignore all the planets in the sky, and call themselves astronomers. Their occupation would amount to nothing in the end, however learnedly they might discourse of comets.

The second error is that such people attach altogether too much importance to reflex action in disease. The moment a practitioner drills into his own head that the locality he cultivates is the cause of a legion of bodily diseases in distant parts, he is apt to overlook the real cause of many diseases, and by omission is apt to do more harm than by commission. Such do not storm the fortress, but are sputtering away their time at one of the outworks. They are applying remedies to the branches of a tree while the morbid disease may be in the trunk or roots Allied to this is a third error which lies in a misunderstanding, or rather a misapplication of the term "reflex action." Descartes, the French philosopher, was possibly the first to use the term "reflex," and gave as an example the involuntary closing of the eyelids when approached by an object.

A more extensive study of reflexes was made by such as Marshall Hall, Grainger, Johannes, Muller, and others. The

fundamental law is well known, which consists of the effect of stimuli to certain sensitive parts which are responded to by muscular contraction in circumscribed areas because of this nerve excitation. We see its operation in certain spasmodic affections and various motor disturbances. A true reflex circle must have its distinct neural structures, viz., an efferent nerve, a focal nerve : cell or cells, and an afferent nerve. These form a reflex arc, and act along physiological lines. It is these physiological facts misunderstood which have led to many errors of specialists in disease, and which may have nothing to do with that law of reflexes in disease. We have instead what the German calls "associated sensations," but not neurotic reflexes, so called. The influence which may begin *ab extra*, may end, and mostly does end, in some part of the great nerve centres. with no direct outward stimulation, so cannot in any sense be called a reflex.

In fact, as pathological investigation goes on, many diseases found in organs were only made manifest in these parts, and the nerve centres as causes of these manifestations were found to be the real seats of abnormal conditions. The list of such diseases would be very extensive, such as atonic dyspepsia, ovarian neuralgia, the various convulsions, epilepsy, exophthalmic goitre, angina pectoris, asthma, diabetes, Addison's disease, pseudo-hypertrophic, muscular paralysis, diphtheritic paralysis, and so-called inflammatory rheumatism and such like.

It is evident that such a disease has been treated locally, not only without benefit but to the injury of the nerve centres in which lies the primary cause. We know how many women have been unsexed to their moral and mental undoing by unwarranted extirpation of the ovaries when no disease existed beyond neuralgic conditions. An intermittent heart was often diagnosed as having been organic disease when the sympathetic nerve to the stomach was the root of the trouble. So-called inflammatory rheumatism in the joints is still classed as such, when we know that the heat, swelling, pain and redness will in a few hours depart to some distant joints and repeat the trouble, and this fugitive or metastatic trouble will fly from joint to joint. No rational explanation can be given of these migrations, except we take into account the nerve influence on the blood circulation. The sympathetic control of the calibre of the blood vessels, and the action of the trophic centres are never taken into account, and yet we know how much these vaso-controlling ganglia influence the human system in health and disease. The sympathetic system is almost everywhere in the body, and not only in intimate relation with the cerebo-spinal system, but controls and stimulates the glandular, visceral, and vascular systems. These facts are largely lost sight of in specialized medical and surgical practice. This is strikingly seen in gynecological treatment, especially when it is claimed that uterine diseases nearly always control mental conditions. The minor abnormalities are magnified into important factors in producing insanity, and thus

effects are said to ante-date causes. The mistake lies in the supposition that these minor influences can be casual or adequately sympathetic. A slight tenderness of the groin at periodic times is usually magnified; a tilting backward or forward or laterally, or a scarcely perceptible prolapsus of the uterus, are solemly entered in the history of such cases as exciting and primary causes of serious brain lesion.

Maiden and married pass through the ordeal of the manipulation of these raiders of feminine reserve and modesty. They seem after a time to become possessed with a dominant idea that these organs are the malign influence which excite and incite more than half the diseases which female flesh is heir to. Such spoilers are not charged with pruriency. It is not presumed that fees enter into their motives, yet the results are the same, and morally as well as socially are deplorable if not immoral. No man of fine feeling can think of these invaders in respect to his mother or wife or sister or daughter without having a chill of repulsion. The many honorable physicians at the head of this specialty who would readily endorse these words of mine could do much in checking this indecent tendency which so generally exists. They have only to minimize the exaggerated diagnosis and relegate the magnified portends to the quack prophets of the day. A righteous revulsion of professional feeling, not to speak of public indignation, is setting in against a needed and special work, when kept within reasonable bounds. Our mothers and grandmothers knew little of these matters, and it would be well for the present generation were less professional officiousness exercised in the direction indicated. Surgical gynecology has an important function to discharge when imperatively demanded, but the knife deftly used in guillotine or extirpation on hypothesis is bad practice.

A large number of our insane women came to our asylum duly certified to as having become afflicted because of ovarian or uterine diseases. Subsequent events show that no such cause exists, or that the disease is in such an innocuous form as to give no good reason for the extirpation; for the caustics applied to tumefactions of merely reflex conditions. The wonderful mechanical appliances with which small abnormalities are punished startle us with their frequency and variety. The day of reaction is coming as clinical knowledge is beginning to make manifest that many so-called local diseases are merely the fruits of pathological changes in some of the great nerve centres. Why then use our therapeutics and our mechanical ingenuity on the branches of the tree when it is the roots which are in distress? My experience shows that not more than 3½ per cent. of female patients are afflicted in this way in any serious form of derangement, yet at least 40 per cent. are certified to having become insane through this cause. It need scarcely be said this is a most extraordinary statement. Those statements are in accordance with our experience: as also is the fact that when insanity sets in many subacute diseases

of the uterus disappear; such as dysmenorrhea, the various forms of metritis, subacute ovaritis and catarrhal conditions. Insanity seems to be antagonistic to their active existence. These alternatives are also true in respect to other diseases, especially those of the lungs of the insane. In this connection it may not be out of place to show the inconsistency of removing ovaries which are only functionally affected. Extirpation means a premature menopause, yet the time of the natural menopause is always understood to be a critical epoch in a woman's life. How much more intense must such a change be when brought about by the surgeon's knife in the young or in middle life? No wonder that such a radical interference partially lowers bodily and mental activity and is a prolific cause of insanity instead of a cure. Our institution has a number of such cases.

To artificially produce a condition which is naturally said to be conducive to insanity is certainly a strange procedure to bring about relief or to act as a prophylactic if the usually accepted opinions are correct. The fact is, the change of life as well as puerperal crises have no special danger in the production of mental disorders unless there exists a predisposition thereto either through hereditary tendency or because of general asthenia, and in which condition the uterus is only one factor, and consequently not the *cause* but an *occasion* of the outbreak.

No one denies that some uterine diseases need surgical treatment, such as uterine fibromata. Some are painful and some are burdensome. We adopt relief by treatment at the earliest possible time. Those thus afflicted are few. We object, however, to the wholesale conclusion that at least 50 or 60 per cent. of our female insane need gynecological treatment. This shows, doubtless, a speculo-mania which could not be found outside an insane asylum. No wonder eminent gynecologists, such as Skene, the late Goodell, Lusk and even Lawson Tait, raise a warning voice against such extravagant statements and such wholesale manipulations.

Such meddlesomeness has also a moral side. These raids upon the genitals of wives and maidens, spinsters and widows are unwarranted unless there are serious symptoms to suspect much michief in these parts. The present race of women are as hardy, as a whole, as were those of a previous generation, yet the womanhood of the past had little trouble with the child-bearing organs. Except as mothers bearing children they knew little about them. Now, as the French say, "The uterus is the woman." This mania has spread to such an extent that women not manipulated are in the minority, and in some of the United States law has stepped in between the physician and patient to protect the latter.

I cannot better conclude than by quoting the wise saying of Dr. L. Bremer, of St. Louis. His opportunities have been very extensive especially among the insane, yet he vigorously attacks the utero-mania which afflicts so many of the medical profession to the hurt of their unfortunate victims. His statements are: "Without

denying the possibility of nervous and even mental derangements arising in women from comparatively trivial diseased conditions of the genital organs, such as catarrh, cervical laceration or stenosis, uterine displacements or ovarian disorder, I agree with those who believe that the frequency of such cases is vastly overestimated. The prevailing practice of treating slight local affections with a view of bettering or curing such morbid conditions as hysteria, neurasthenia and allied diseases of the nervous system are generally injurious.

"I go the length of saying that gynecological treatment, unless imperatively demanded of the unmarried female, is a crime. Its effect upon the mind of the chaste young woman is that of defloration. Her moral tone, her manner of judging things are altered and lowered with the consciousness of there being even a shadow of a flaw on her virginity. These subtle qualities disappear, which constitute the charm of girlish innocency. Her mind is polluted. She is unfit for marriage, and all this because the doctor happens to hold the opinion that by manipulating the uterus he can cure neurosis."

Skene says: "In this age of aggressive surgery, operations have been made to remove the ovaries in the hope of relieving a variety of mental and nervous affections. It is evident, however, that about as many women go mad because of the ovaries having been removed as there are who are cured of reflex mental and nervous diseases by their removal."

The eminent Dr. Albutt well says: "How intimately this organ, or this system, is associated with the nervous system is well known; but unfortunately, the weight of our knowledge all leans one way —it leans to a curious and busy search for every local ill which may arise in the female pelvis, while blind oblivion scatters the poppy over every outer evil which in its turn might hurt the uterus; nay, more, a resolute prejudice would deny that in the women any distress can arise which owes not its origin to these mischievous parts.

"The uterus has its maladies of local causation, its maladies of nervous causation, and its maladies of mixed causation, as other organs have; and to assume, as is constantly assumed, that all uterine neuroses, or even all general neurosis in women, are due to coarse changes in the womb itself, is as foolish as to suppose that the stomach can never be the seat of pain, except it be the seat of some local affection, or that the face can never be the seat of tic-douloureux unless there be decayed teeth in the jaw. All mucous membranes, indeed, seem readily to betray nervous suffering by relaxation or changed secretion; and I have no doubt whatever that a very large number of uterine disorders, which are elevated to the place and name of diseases of the uterine system, are but manifestations of neurosis. All neuroses are more common in women than in men, such as facial neuralgia and the pseudo-angina. Not only so, but in the uterus they possess one organ the more,

with its own rich nervous connections, and its own chapter of added diseases and neuroses: but to say that all these maladies are due primarily to uterine vagaries is to talk wide of all analogies.

"A neuralgic woman seems to be peculiarly unfortunate. However bitter and repeated may be her visceral neuralgias, she is either told she is hysterical or that it is all uterus. In the first place she is comparatively fortunate, for she is only slighted, in the second case she is entangled in the net of the gynecologist, who finds her uterus, like her nose, is a little on one side; or again, like that organ, is running a little, or it is as flabby as her biceps, so that the unhappy viscus is impaled upon a stem, or perched upon a prop, or is painted with carbolic acid every week in the year except during the long vacation when the gynecologist is grouse shooting, or salmon catching, or leading the fashion in the Upper Engadine. Her mind thus fastened to a more or less nasty mystery becomes newly apprehensive and physically introspective, and the morbid chains are riveted more strongly than ever. Arraign the uterus, and you fix in the woman the arrow of hypochondria, it may be, for life."—(Visceral Neurosis.)

Dr. C. H. Hughes, editor of the *Alienist and Neurologist*, says: "The gynesic diseases of women are largely neural. They are also, it is obvious, even from this cursory glance at her organism and its inter-related cerebro-spinal and ganglionic system, both neural and psycho-neural, as well as simply gynesic.

"If a man is a bundle of nerves, as he has been defined, woman is a similar bundle, plus a uterus and its appendages, and this uterus is in itself a bundle of nerves. If we study woman and her special diseases, in this light we shall better comprehend her than if we study only her diseases as limited to the uterus alone. And woman will better understand herself if she is taught that there is much more of her than the uterus and its appendages to become diseased. The womb disease crank, among our patients, who is the bane alike of enlightened neurology and gynecology, will then disappear."

It is not to be forgotten that in many there is no etiological connection between insanity and those diseased conditions. The co-existence of diseases is one thing, and their relation to one another as cause and effect is another. Local diseases are often contemporaneous without being necessarily related to one another except in a remote degree as parts of the same organism. Herein comes fallacies in tabulating cases and recoveries as consequent upon local treatment or operations when there is no proof that such is the case. We know it to be a fact that a large number afflicted with uterine or ovarian disease, organic or functional, recover from insanity, although the abnormal conditions may not be ameliorated or cured. Many of such diseases existed long before insanity came on and were not casual in any way. Not only so, but many cases of recorded recovery are only those of remissions in periodic insanity or those who have got well from eccentric shock or septic

excitation, not because of but in spite of all interference, operative or otherwise. It is impossible then to procure authentic or absolute data as to the benefits or otherwise, of treatment or operations on the pelvic organs except by collecting a large number of cases and comparing them with an equal number of cases not thus claimed by those who see a panacea in their petty local interference. "All grists go to their mill."

Undue prominence is given to minor uterine diseases. I am sure that an importance is attached to many of them as factors in producing insanity which is not warranted. This wholesale invasion has a moral connected with it which may finally lead to what we should be able to resist on ethical and rational ground, namely, legislative interference to some degree. Eminent gynecologists are wisely raising a warning in the right direction of conservative treatment. The statistics of the death roll in respect to those thus treated, who have perished by the use of the scalpel, are doubtless correct. No objection can be raised in regard to the correctness of the mortuary records.

PULMONARY TUBERCULOSIS.

BY JOHN HUNTER, M.D., TORONTO.

Prognosis—Treatment.

"Of the many complicated problems presented to the physician, the prognosis of pulmonary tuberculosis is one of the most difficult. An accurate prognosis would involve full knowledge of the parasite and its host, as well as of their environments. At present little is known concerning variations in the virulence of the tubercle bacillus as it occurs in the body of man, and still less information is forthcoming as to the histo-chemical and biological conditions of the human organism which retard or favor the development and activity of the parasite" (*Percy Kidd*).

The above quotation tersely expresses the character of the problem to be solved in making a prognosis, and the difficulties in the way thereof. Here, as well as in most other diseases, the wide range of the knowledge and experience gained in general practice is of inestimable value to the physician and places him many "laps" ahead of the new hot-house exotic—the specialist—and, *en passant*, the proper dissemination of this virile fact is the best antitode to this "latter-day" craze for specialism. The tuberculous patient has to put up a fight for life, and every condition or influence that militates against health must be considered in the question of prognosis. It is very obvious then that there should be made a very full investigation into the family history, to ascertain hereditary tendencies, a careful scrutiny of the climatic, social, domestic and personal environments, a very thorough examination

of the conditions and functions of all the other organs of the body, with special reference to upper air passages, digestive, vascular, hepatic and renal systems. If all of these are, or can be brought up to a normal standard, then we have to consider the lung trouble *per se*. The trend here is toward destruction of tissue, either by a process of softening or hardening—caseation or formation of fibroid tissue. The extent to which destruction has gone, and the rapidity with which new areas are being invaded, mark the progress of the disease. In the miliary form the distribution of tubercle is usually very extensive, hence the prognosis is extremely unfavorable; these cases ending fatally either within a few days or in two or three months. The acute caseous variety—either the lobar type, where the infiltration is confined to one or more lobes, or the broncho-pneumonic, with its widely disseminated lesions—is usually characterized by marked inflammatory action, and a rapidly fatal course. Unless some remission of the acute symptoms take place, these patients do not live many months. In all those cases, where there is a tendency toward the formation of fibroid tissue, the process is so markedly chronic that the doctor is very liable to die before his patient, hence it is seldom prudent to set any time limit under these circumstances.

The above types form but a very small percentage of tuberculous cases. It is with the disease in its usually more or less chronic forms that the perplexing problems in prognosis arise, especially when such patients seek advice in regard to change of climate. Presuming that, apart from the local lesions, every other factor pertaining to the health of the patient has been thoroughly investigated, we have then to ascertain the character and extent of the lung trouble. It follows, of course, that the value of the prognosis depends practically on the accuracy of the diagnosis.

Unfavorable Conditions.—Acute character of the symptoms, rapid extension, temperature variations, *e.g.*, continuously above normal or sub-normal, markedly intermittent or remittent, or the inverted type into morning exacerbations and evening remissions, early caseous changes and formation of cavities, intractable cough, quantity and purulent character of sputa, presence of numerous bacilli in sputum, troublesome dyspnea and exhausting hemorrhages.

Favorable Conditions.—These are practically the very antithesis of the above, and are the ones on which we chiefly base our opinion when consulted in regard to a change of climate. They are: Mild onset, localization of lesions, through incapsulation of tubercular foci or by deposit of fibroid tissue, slight temperature variations, diminution in number and entire absence of bacilli for long periods from the sputum, healthy and vigorous condition of one lung, absence of much dyspnea, troublesome cough or debilitating hemorrhages.

The consideration of a change of climate would involve the following factors, in addition to those just enumerated: Nature

and extent of any complications, *e.g.*, cerebral, laryngeal, pleural, digestive, vascular or renal, mental and physical vigor, ability to enjoy and taste for outdoor life, amount of wealth, or ability and possibility of earning a livelihood. However, judging from personal experience, whilst attending a patient last winter, at one of the popular health resorts of California, physicians do not seem to have any particular standard of health in the selection of the cases they send to these resorts—some with scarcely a perceptible lesion, others with both lungs extensively involved; one well nourished, another a mere skeleton; one vigorous, the other has to be taken off the train on a stretcher. The only standard in sight was a financial one—nearly all came in Pullman cars, and were able to pay for any attendance required.

Treatment.

Prophylactic.—The discovery of the bacillus, and especially of its contagious character, make prophylaxis of paramount importance. Whether we accept the degree of contagiousness as being small or great matters but little, since as we do not know what constitutes immunity we are justified in assuming that any person may acquire the disease from exposure.

Some sage has said that in order to train up a child properly we must begin with the grandmother; so a great help in eradicating tuberculosis would be to begin with the mother during the ante-natal stage of the grandparents that are to be. The need of such great care during the course of pregnancy with tuberculosis, and the subsequent management of both mother and child, naturally suggest the question of the propriety of marriage of those already infected with this disease, or whose physical condition or family history predisposes that way. If all such persons could be content with the hallucinations of courtship until the prospective bride had passed the menopause, it would be infinitely better, both for the individuals and for the race. When infection takes place after marriage, the question of a separation until the child-bearing period is over is one that may possibly engage the attention of those intrusted with State medicine, as pregnancy is so often followed with disastrous consequences to tuberculous subjects and their progeny.

However these questions may be disposed of in the future, the work at hand is to give the tuberculous patient during pregnancy the best aid we can devise—sunny, well-ventilated rooms, outdoor life, wholesome food, daily bath, and to teach her the importance of striving to attain a high standard of health, both in the interests of herself and child. The infant should not be suckled by its mother, but be given to a healthy wet-nurse, or brought up on a diet of boiled milk, cream, soups, broths, eggs, and, where possible, in the dry, bracing air of the country. These children should be under medical surveillance during childhood and adolescence.

since unsanitary homes, improper or unwholesome food, immoral habits, excessive study, diseases incident to childhood, especially those involving the upper air passages, make them very vulnerable subjects to tubercular infection.

In the adult, treatment demands, owing to the contagious character of the disease, the employment of the most effective sanitary measures, especially for the destruction of the sputa. Vessels containing a strong solution of carbolic acid or other antiseptic should be provided; all the articles used at meal-time washed in water containing soda, and afterwards in boiling water; all soiled handkerchiefs, linen and underwear boiled in a separate vessel: the hands of the patient, and especially those of the attendant, should be washed in a disinfectant solution after exposure to infection.

The bedroom and living rooms deserve careful attention. Unfortunately for the prevention of tuberculosis, we who live in the "foremost files of time" show very poor judgment, from a sanitary standpoint, in furnishing our homes. In order to display actual or imaginary wealth, we cover our floors with carpets, that readily absorb all the infectious moisture that adheres to the soles of boots or shoes, retain it until dry, and then on sweeping give it up to be diffused over upholstered furniture, bedding, and the endless varieties of trappings about windows and doors. We thus foolishly, if not culpably, go on infecting and killing each other with this disease, because in house-furnishing reason and intelligence alike seem unable to supplant the wanton whims of fashion or the desire for the ostentatious display of wealth. However, the physician, in justice to his patient, must brush these vanities aside and arrange one or two rooms to meet the most exacting sanitary requirements —painted floors and walls, and the use of furnishings that can be kept thoroughly aseptic, proper ventilation both day and night, with abundance of sunshine.

In regard to food, its quantity, character and preparation are of vital importance. It would be of immense value to future generations if our school boards were progressive enough to make such provision as would enable every school girl to acquire sufficient knowledge of food products and skill in the preparation of them to meet the demands of a healthy dietary. However, until this millennium dawns the physician must arrogate some of the functions of a *chef*, and devise a dietary rich and varied, made up of milk, cream, meats, fats, oils, puddings and breadstuffs of all kinds, and liquors. The following "bill of fare" in vogue at health resorts may serve as a specimen:

"Breakfast, 7 to 8 a.m., coffee, cocoa, tea, bread and butter and milk; 10 a.m., milk, bread and butter, broth, eggs, wine: 1 p.m., soup and three other courses, two of meat and vegetables, pudding, wine; 4 p.m., same as early breakfast: 7 p.m., two courses, one hot and one cold, with vegetables, wine: 9 p.m., milk and cognac." Or: "Breakfast, 8 a.m., coffee, bread and butter, ham, tongue, sausage, milk: 1 p.m., two hot courses, meat, fish, potatoes,

green vegetables, sauces and butter, pastry, fruit, ice cream, coffee, milk; 7 p.m., one hot course, meat as at dinner, and one cold, as at breakfast."

The proper clothing to wear is another very essential consideration. Avoid "chest preservers," mufflers for mouth, etc., and order woollen underwear—light in summer and sufficiently heavy in cold weather to preserve comfortable warmth. Clothing must be changed frequently—better an entire change at bedtime.

Baths daily—sponge, shower, or full baths—in water as cool or cold as can be borne or followed with a healthy reaction, and accompanied with proper massage, friction, or rubbing, are very valuable adjuncts. These subjects, too, should be instructed to drink as much water as possible, thereby supplying more moisture to the lung tissue and aiding beneficially the functions of all the secretory and excretory organs.

DOES OUR KNOWLEDGE OF THE PATHOLOGICAL CHANGES IN OPERATION IN SPINAL CURVATURE ILLUMINATE THE PATH OF ITS RATIONAL TREATMENT?

BY THOMAS H. MANLEY, M.D., NEW YORK.

The writer is led on to this leading question by a rather warm correspondence, lately published in the *Journal of the American Medical Association*, November 12th, 1898, in which the distinguished surgeon, Dr. A. M. Phelps, makes a sharp assault on some of the premises taken by an editorial writer in a previous issue, who made a sweeping denunciation against mechanical supports in "applying a brace to a child suffering from spinal curvature."

Professor Phelps, in an ardent rejoinder, refutes the allegations of the author, who would cast aside all braces; denying that muscular inertia, paralysis or atrophy plays any part in the pathology of spinal curvature; but in his enthusiastic defence of the corset he goes to unwarrantable extremes, and alleges that "the muscles do not hold the spine erect, . . . muscles only balance the spine"; and, he adds in italics, that "no amount of gymnastics can, or ever has, diminished the curve due to bone changes in lateral curvature of the spine; gymnastics and massage are of little use, or positively harmful in such cases."

Now, let it be remembered that the type of spinal curvature under consideration is not *Pott's disease* or tubercular disorganization. When Phelps says, "There are many factors in the etiology of spinal curvature, which the profession know little about," we entirely agree with him; and had he gone further and added, that of the majority of them we know *nothing*, he would have been

nearer correct. It therefore follows, that our treatment must be rather on empirical lines than on scientific principles.

But there are some things that we *do know* in the causation, which will shed some light on therapeutical indications. *First*, we know that the "high hip," the sloping shoulder and prominent shoulder-blade—so-called spinal curvature—are hereditary, largely; more common, by all odds, in the female growing child, usually becoming prominent at puberty: from the twelfth to the fourteenth year: trauma nor occupation cutting no figure whatever in causation. It would be no stretch of language to stamp the majority of these curvatures as natural, or depending on normal conditions in the processes of growth and development.

In order to make this postulate clear there are some few things in connection with bodily development which it may be well to review here.

First, the great mechanical disadvantages of the human biped, in consequence of the *vertical* attitude of the spine. The infant spine is nearly straight, and *all* the spines of adults are curved. The arching and bowing of the spine commence when the child takes the upright posture. The sagging first begins in the cervical segmtent, when the weight of the head induces an anterior convexiey. The combined weight of the head, upper extremities and upp\r thorax press the central dorsal vertebræ outward, with a resuhting convexity. The solid, quite immobile, lumbar segment sligs tly yields and prevents an inward inclination Sometimes theee normal curves are considerably exaggerated, which is as much a dsviation as though it were lateral; but no notice is given to thi in the works on surgery, *because it does not induce a deformity.* It therefore follows, if we would endeavor to *prevent* a so-called, and properly so-called, idiopathic, lateral curvature, we should discourage female infants from taking their legs and walking until late—until they are at least a year or fifteen months old.

Now comes the controversial side of the problem. As the female child approaches puberty, should we, as a routine custom and prophylactic expedient, apply a *spinal brace*, or what is known in the trade as a stays or corset? Every properly adjusted corset is a *spinal support.*

Now, Professor Phelps' contention is, that once lateral curvature is well defined, we may massage or douche them forever: that curve is to remain. My own experience is entirely in accord with this position, with this qualification, viz., if comfortable corseting is possible, the tendency is for the child to outgrow the gross deformity, before the bones are well and permanently set, say, at twenty-five years, though traces of it are sure to remain.

But, with a knowledge of a tendency of curvature, or rachidian deviation, why not take time by the forelock and habitually recommend the wearing of corsets by young girls *before* these weakened areas of the spine and the dorsal segment show signs of sagging?

In the *Virginia Medical Monthly* for September 9th, 1898, the writer, in a contribution, entitled "The Corset, its Use and Abuse; with Lacing and Tight-Lacing," has anticipated this question, and attempted to demonstrate that the properly adjusted corset is a most useful and necessary garment, always serving as an auxiliary support to the spine and as an agent of great potency in the prevention of spinal distortions.

As to whether in these deformities the major defect is in the osseous blocks of the rachidian-chain, in the tendons, muscles or ligaments, is really of little consequence in treatment. All must confess that there is defective support; the pyramid tends to topple; we have a "leaning tower." Our course of treatment is clear enough: *prevent* it, in its early evolutionary stages; *arrest* it, and if *permanent* provide for the mechanical deficiency.

A FALSE NOTE FROM THE BALTIMORE ORIOLE!

BY ALBERT S. ASHMEAD, M.D., NEW YORK.

In the American Public Health Association (Ottawa, Ont., September 27th to 30th, 1898) there was only one discordant note in the leper discussion; this note came from Dr. George H. Rohé. This gentleman, who is a former health officer of Baltimore, and now President of the American Health Association, deprecated the "sanitary shriekings and hysterics" caused by the ravages and threats of leprosy. He did not deny that the ravages had taken place (and if he had it would have been of very little importance); he did not deny that the threats had been considered as terrible by the leprologists of the Berlin Conference. But he thinks—he, who never, as far as I know, lived in a leper country, and who is not considered as a leprologist, who is not even a dermatologist, which, in my opinion, would be nothing, but which some people consider as giving a man a certain right to speak about leprosy, that he, *knowing nothing of these things* (the italics are mine, of course), *would just as soon treat a case of leprosy in a general hospital as any other disease* (the italics are his). I certainly congratulate Dr. Rohé on the strength of his nerves, but think that he ought to consider the comparative weakness of other people in this respect. I do not think that hysterics caused by a disease which has killed millions, and which plunges the individuals attacked into the very depths of human misery and despair, must be deprecated. I should say, "*Homo sum, nil humani alienum a me puto*," and bear and excuse the hysterics.

It is less dangerous, says this gentleman, than syphilis, however. As he is not a leprologist, as he is not even a dermatologist, how dare he affirm what a number of the most eminent leprologists and dermatologists have denied, at the conference

of Berlin, without giving any reasons; without showing that his experience, his experiments had convinced him of the truth of what he so positively asserts. It seems it is only his distaste for hysterics, or for a "scene," as the English say, that makes him laugh at the voice of warning coming from more competent men than he is. How can he affirm that a disease which has been before the whole world declared incurable (by men who know more of leprosy than he, whose opinion is received with respect by all nations, while nobody would ever expect to receive useful instruction in this matter from him), of which the manner of transmission has been declared unknown, whose period of incubation is exceedingly uncertain—that such a disease is less dangerous than syphilis? Syphilis, at any rate, is curable; its mode of transmission is as well known as anything in medicine can be; there is no doubt about its period of incubation; we know everything about its development and its different stages; we can very well protect ourselves against transmission of it, while we do not know (except by isolation, which does not commend itself to the mind of Dr. Rohé) any means of warding off the attack of leprosy. Of course, hospitalism is very well for the sick, but the conference of Berlin thought there was a little more to do, in fact infinitely more to do, that is, to protect the healthy, to stop the progress, the spreading of the disease.

If Dr. Rohé does not understand what the duty of those who know something about leprosy is, and what is their principal aim, he need only try to find out the meaning of what Hansen told the Germans: "Wait fifteen years: keep your lepers isolated, and, as lepers do not live long, you will have done with leprosy." It is true that Norway does not take all her lepers into private asylums for fifteen years; otherwise, as the Norwegians have legislated about it for over forty years, they would be quite free of the scourge. But then they prefer to isolate only one-third of their lepers, and the rest—the Lord and the North American republic will take care of them!

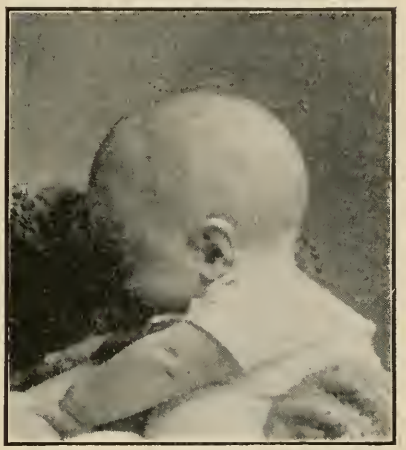
THE RADICAL CURE OF ENCEPHALOCELE.

BY FREDERICK WINNETT, M.D., M.R.C.S. ENG.,
Surgeon Outdoor Department Toronto General Hospital, and Victoria Hospital for Sick Children.

THE child, Norman M., aged two months, was noticed at birth to have a tumor in the lower part of the occipital region. It has increased to twice its original size, but does not seem to affect the child injuriously. Circumference of skull measures 15 inches. The tumor, as seen in accompanying photograph (No. 1), is somewhat pedunculated, measuring at the base 6½ inches, and at its largest

part 8½ inches. It is not tense, fluctuates, is slightly translucent, and can be partly emptied. When the child cries it becomes tense and darker in color. In the centre can be felt a small hard body, leading to its base. The opening in the skull seems small and indistinct.

No. 1. Norman M., aged 2 months.



No. 2. Norman M., aged 4 months.

September 21st, I operated at the General Hospital. The child was nursed before being chloroformed. In making the lateral flaps the skin was found closely adherent to the membranes.

No. 3. Tumor containing cerebellum.

The neck of the sac was cleared, and found to be about three-quarters of an inch in diameter. It was ligated with Staffordshire knot and removed. The flaps were sutured and the wound dressed in the usual way. The recovery was uneventful, and photograph

No. 2 shows the child as at present, enjoying perfect health. Incoordination is not evident.

Examination showed the tumor to contain, along with considerable fluid, the entire cerebellum, including the vermiform processes, as seen in the photograph of the same. It is atrophied and weighs 26 grains.

The successful issue of this operation is peculiarly interesting in view of the hopelessness of palliative or radical treatment, as judged by many authorities. Lawrence, who collected seventy-nine cases receiving palliative treatment only, found six reached adult life. Hutchinson says nine out of every ten operations are fatal. In Treve's "System of Surgery" we find: "In the case of encephalocele operation is not advisable." Owen, in "Surgical Diseases of Children," says: "If it were suspected that some cerebral tissue were in the cyst no treatment would be advisable."

THE OUTBREAK OF SMALL-POX IN KENT COUNTY, ONT.

BY W. F. BRYANS, M.D., TORONTO.

DURING October and November, 1898, there were four cases of small-pox in Camden Township, Kent County.

The first case occurred Oct. 3rd, two weeks after first exposure and one week after last exposure. The disease had been contracted in Detroit from a family supposed to have chicken-pox. There were ten persons living together in a farm-house where this first case occurred. Of these ten persons, five had not been vaccinated, and of the five four contracted the disease. A baby, eight months old, escaped, though not vaccinated. The five who had been vaccinated five years previously showed one good cicatrix, and these escaped. The four cases occurred respectively on Oct. 3rd, 19th, 22nd and 24th.

Incubation stage: First case, 7 to 14 days; second case, 16 days; third case, 19 days; fourth case, 21 days. The first case was semi-confluent and very severe. The temperature was characteristic in each of the first three cases. The fourth case was very mild. In second case the highest temperature was 105½ before the rash appeared. The nausea was very marked in each case and lasted forty-eight hours. All made a good recovery. The ten persons lived throughout the outbreak in a seven-roomed house. The sick were only separated from the well by a partition. There was no attempt at separating the sick and well from Oct. 3rd to Oct 14th. The disease was known to be small-pox on Oct. 9th.

The rash was confluent on the head and face in first case. Pox could be seen under nails of fingers and toes. Some occurred also in mouth and pharynx. In second and third cases the rash

appeared first on lower third of legs, and was more marked in this situation than on any other part of body.

Treatment.—No special treatment was adopted. Liq. am. acet. was used freely at the beginning. Six ounces of whiskey were used for the four cases, and during pustular stage the patient was freely dusted with a mixture of equal parts of finely powdered carbo ligni, ac. boric and acetanilid. This mixture seemed to be useful as a deodorizer and also relieved the soreness of the raw surfaces. The ventilation was such that the patients were practically treated in the open air.

The diagnosis was very easy in the first three cases, there being present the characteristic temperature, marked nausea and the umbilication of the vesicles. In the fourth case the nausea was marked; there was very little elevation of temperature, and the umbilication of the vesicles could not be detected, except, perhaps, in one vesicle.

A Year's Inquests in London.—The report for 1897 of Mr. A. Spencer, Chief Officer of the Public Control Department of the London County Council, was issued during the first week of September last, and contained some interesting information concerning the inquests held in the city during 1897. It appears that 7,428 coroners' inquests were held in London during the year, which is at the rate of 1.6 per 1,000 of the estimated population. Of these, 4,477 were on the bodies of males, 2,948 were on the bodies of females, two were on skeletons (presumably of children) in which the sex could not be determined, and one was on treasure-trove, for the coroners in England hold investigations into the ownership of buried treasure, silver, coins, etc., with the same formalities with which they inquire into the causes of sudden death. At forty-three of the inquests a verdict of wilful murder was returned, while the undermentioned verdicts were recorded in other cases: natural causes, 3,616; accidental death, 2,405; neglect and exposure, 518; suicide while insane, 431, and found drowned, 164. The balance of verdicts, among other returns, included 21 cases of manslaughter and 9 of justifiable homicide, while in 56 cases the cause of death was unascertainable. The cases of neglect and exposure were very generally complicated with alcoholic excess; while it is noticeable that all the suicides were supposed to be mad, the old verdict of *felo de se* not having been once returned. Nearly one-quarter, *i.e.*, over 500, of the inquests where the verdict of "death from accident" was returned were held upon infants found suffocated in bed with their parents, and this in spite of the repeated requests from coroners that all infants should be provided with some sort of cot. It is generally believed by the medical profession in London that a verdict of murder would fit many of these cases, but it is almost impossible to bring the crime home to the parents. .

Ophthalmology and Otology.

. . . IN CHARGE OF . . .

JAMES M. MacCALLUM, M.D.

OCULAR TROUBLES IN DIABETES.

Dianoux gives the impressions which twenty-three years of practice have left: As regards the lens loss of transparency may occur, leading surely to cataract, soft or hard, according to the patient's age. The soft cataract develops exclusively in young people attacked with acute or pancreatic diabetes, and becomes complete in a few months. Rapid cataract in an adolescent should make us suspect diabetes. The grave form of diabetes has not the same action on the lens in the adult, in his experience. For senile cataract in the diabetic operation may be perfectly successful; whereas operation for diabetic soft cataract is frequently followed seven or eight days later by pulmonary apoplexy and death; and in any case the patient rarely survives twelve or fifteen months.—*British Med. Jour.* J. M. M.

PROTARGOL IN PURULENT OPHTHALMIA IN INFANTS.

In the cases treated with these newer salts of silver there has been less ulceration of the cornea, with iris-protrusion and imprisonment; the gonococci had disappeared in from two to four weeks, or more quickly than by the older method; there had been an earlier disappearance of the secretion and control of the inflammation; the restoration of the injured cornea and conjunctiva had been more prompt, and the patient had suffered much less. In making the solution of protargol, it is best to mix the salt with a little water and glycerin to a paste, and then add sufficient lukewarm water to make a .25 to 2 per cent. solution. Plan of treatment recommended: If only one eye be affected, seal up the healthy one, taking care to inspect it every second day. Ice-pledgets are continuously applied to the inflamed eye, night and day, until there is positive evidence of diminution in the secretion—a period varying from a few days to two or three weeks. Meanwhile the eyeball and conjunctival sac are very frequently irrigated with a saturated solution of boric acid. With a large pipette, a .5 or 1 per cent. solution of protargol is carried rather forcibly over the whole eye four or more times daily until the secretion diminishes, when a 2 per cent. solution may be used at longer intervals. The disease should be brought under control by such treatment in the

course of two or three weeks. The secretion should be examined for gonococci on alternate days and the eye not considered safe until none of these organisms has been found for a full week. Protargol lends itself readily to the needs of the ophthalmologist, as it is unaffected by being combined with sodium chlorid, cocain, atropin, eserin, etc. It is not decomposed by the albuminous substances found in the secretions from the mucous membranes, and it is the only known silver compound which is not precipitated by dilute hydrochloric acid. Protargol is a silver proteid compound, occurring as a yellowish powder, which is readily soluble in cold or hot water. Both the powder and the solution are stable. Silver nitrate contains 6.35 per cent. of silver, and in this respect it holds an intermediate position between argonin and protargol. The last mentioned is the richest in metallic silver.—*S. S. Peck, M.D., in Philadelphia Med. Jour.* J. M. M.

CASSARIPE.

S. D. Risley, A.M., M.D., writing in the Philadelphia *Medical Journal*, says: "I have used cassaripe with most gratifying results in a large series of cases of ulcers of the cornea, and in a large group of cases of purulent disease of the conjunctiva. I have at no time used it stronger than in a 10 per cent. ointment. It causes no irritation, however, and I see no objection to employing it in much stronger preparations. The ointment was applied freely between the lids, and the eye subjected to massage so as to distribute it thoroughly into the retrotarsal folds, and, in the corneal cases, a protecting bandage was applied. When the patients were in the hospital this was repeated three times daily; in the out-door cases, morning and evening. No other treatment was employed except the use of atropin and a wash of boric acid. In a few minutes after the application of the ointment in new cases the discomfort was much diminished, and the improvement was usually rapid, as compared with other modes of treatment. In a case of ophthalmia neonatorum, the eye was thoroughly cleansed, the ointment of cassaripe applied, and a supply given to be used three times daily at home, after the usual wash. In two days the purulent discharge had entirely ceased." J. M. M.

Fixing the Blame.

A clergyman in Wales is reported by the *Lancet* to have preached a sermon recently, in the course of which he said that "diphtheria is now prevalent in our midst, and many parents, made disconsolate by the deaths of their children, in their moments of despair have doubtless felt inclined to blame Providence. Do not blame Providence: blame the Swansea corporation, and blame yourselves for allowing the laws of sanitation to be ignored."—*Med. Record.*

Selected Articles.

A MONUMENT TO CHARCOT.

On December 4th, 1898, the monument to Charcot erected to the left of the main entrance of the Salpêtrière, and close to the statue of Pinel, was formally unveiled in the presence of M. Georges Leygues (Minister of Public Instruction), MM. de Selves (Prefect of the Seine), Brouardel (Dean of the Faculty of Medicine of the University of Paris), Navarre (President of the Municipal Council), Lockroy (Minister of Marine), Thuiller (President of the General Council), Napias (Director of the Assistance Publique), Bertrand (Perpetual Secretary of the Académie des Sciences), a deputation representing the French Institute, and a large assemblage of medical and scientific notables. Dr. Jean Charcot, son of the famous physician, and Madame Charcot, represented the family.

Professor Brouardel, in presenting, on behalf of the Committee, the monument to the city of Paris, expressed the feeling of gratitude which the Faculty of Medicine felt towards the great neurologist who had shed such lustre upon it. He also expressed the hope that Charcot's pupils would crown the work of their master, and draw inspiration from his love for science, and in particular that his son, in whom he had justly placed such great hopes, should write the page which he himself had been prevented from completing.

Dr. Navarre, President of the Municipal Council, who received the monument on behalf of the city, recalled the fact that the Municipal Council had done all in its power to further the investigations and second the efforts of Charcot. It helped him to lay the foundations of that Salpêtrière which had been transformed by him into a school shedding light upon the whole world. He praised Charcot particularly for having brought within the realm of the known and the natural things formerly classed as supernatural, and often attributed to demoniacal influence.

Professor F. Raymond, who followed, spoke as the successor of Charcot at the Salpêtrière, a position which he felt imposed upon him a very heavy burden. He gave a rapid review of Charcot's work, laying particular stress on what he had done towards determining the localization of the functions of the brain. He went on to speak of Charcot's researches on the nervous system, which had brought about a revolution in our manner of conceiving the structure, functions, and pathology of the

spinal cord. Charcot, said Professor Raymond, was, indeed, the most admirable healer of nervous diseases, of that great neurosis called hysteria. He taught us a just estimate of the extreme frequency of that affection. By him we were disabused of the error which consisted in believing that women were almost exclusively the victims of hysteria. Through Charcot we know to day that both sexes pay practically an equal tribute to the disease. Again, Charcot's investigation of stigmata supplied the means of detecting hysteria, in cases where it simulates symptoms and disorders, which medical men had been in the habit of attributing to incurable lesions of the nervous centres. Thanks to the discoveries and the teaching of Charcot, we have learned to cure paralyses, tremors, convulsions, pains, disorders of speech, perversions of intelligence and character, and many other morbid manifestations which not very long ago would have been looked upon as refractory to treatment; and in many cases these cures had the appearance of a miracle. Another subject successfully studied by Charcot was hypnotism. He it was, said Professor Raymond, who showed us that while the intervention of the hypnotizer has in it nothing of mystery—since it does neither more nor less than physical agents—the phenomena of hypnotism have nothing more of supernatural about them. They are essentially products of the cerebral automatism, just in the same way as the other manifestations of hysteria. In the course of its activity the brain stores up in the condition of memories all that passes within us and around us, and in particular the representations of the movements which we execute with the appearance of spontaneity, or which we accustom ourselves to execute under the influences of certain impulses. A large part of the phenomena springing from hypnotism are nothing else than the reawakening and setting in motion of these memories in a being whose personal will is held in subjection by another will, which dominates and directs his cerebral automatism. After speaking of Charcot, as he was in his family and his home, Professor Raymond went on to say that he allowed no day to pass without consecrating a large portion of his time to his researches, his teaching, and his patients. His power of work was equal to the brilliancy of his intellectual endowment; and he was further gifted with an indomitable perseverance and an indefatigable ardor in research and in teaching, a remarkable tenacity of purpose and resolute courage in defending his opinions. The influence of his teaching was unequalled; and he not only trained his pupils, but encouraged them to take up original research, arming them with his method, penetrating them with his spirit, and animating them with his own enthusiasm. He helped them on in their career, supporting them by the whole weight of his authority. In this way he created a school still flourishing in vigorous life, which walks in his footsteps.

Professor Cornil, who spoke for the Academy of Medicine and the Society of Anatomy, next said a few words expressing his

respect as a faithful pupil of Charcot, who had been his predecessor in the Chair of Pathology in the Ecole de Médecine.

The Minister of Public Instruction, in closing the ceremony, delivered an address in which he said that, looking upon the great and beautiful statue which a master sculptor had modelled in bronze, one asked whether it represented a professor or a priest. It was easy to guess that it represented an apostle. Such indeed was Charcot by his enthusiasm, his faith, and the breadth and boldness of the horizons which he opened up. On concluding his address M. Leygues conferred upon Dr. Gombault, Physician to the Ivry Hospital and one of Charcot's oldest and most distinguished pupils, the cross of a Knight of the Legion of Honor.

The statue is from the chisel of the distinguished sculptor, M. Falguière, with the collaboration of the well-known architect, M. Samson. Charcot is represented in his professional robes standing in the act of giving a demonstration, the right hand indicating the left temporal region on the head of a dead body lying beside him, and the left making a gesture habitual to the great master in lecturing.—*Brit. Med. Jour.*

SYNOVITIS AND PERIOSTITIS OF TRAUMATIC ORIGIN TREATED BY DRY HOT AIR.

BY F. H. LITTLE, M.D.,
Surgeon-General State of Iowa, Muscatine, Iowa.

THE literature of dry hot air therapeusis, particularly by means of isolated dry hot air at intense temperature, is rapidly accumulating. Intended first as a remedy for acute and chronic articular and muscular rheumatism, it was soon found to be very efficient in arthritis, synovitis and teno-synovitis, no matter whether due to trauma, rheumatism or tuberculosis. My own experience in traumatic periostitis is practically new. The intense heat apparently reduces inflammation, even when situated deeply, causes absorption of effusion and relieves pain.

The following cases will substantiate this so far as traumatic synovitis and periostitis are concerned:

J. S., male, aged 40, merchant. Two years ago, while crossing street, he slipped, causing severe strain to right knee. Two days afterward had pain, swelling and tenderness of joint, and was unable to stand or walk. The parts were very hot, and so much effusion had occurred that the limit of the synovial membrane was clearly defined. Diagnosis, acute synovitis. He was at once put to bed, and the joint had constantly applied to it evaporating lotions as hot as could be borne. After ten days of this kind of treatment, and the swelling and tenderness somewhat subsided, I applied a plaster-of-Paris dressing and allowed him to get around

on crutches. This was left on for six weeks, and upon taking it off no improvement was manifest. He then went to Hot Springs, Ark., and was there eight weeks, with no improvement. He then went to Mount Clemens, Mich., and spent five or six weeks, without improvement. He was then treated by intra-articular injections of a 10 per cent. solution of iodoform in olive oil, and the leg again put in plaster. This time the plaster dressing was left on for eight weeks. Upon removing it, the joint was found partially anchylosed, very tender, and the muscles of the thigh and leg were wasted to a shadow. For the next year but little was done for the joint, except the constant use of crutches, and an occasional massage treatment. About October 1st, 1897, the case again came into my hands. The joint was partially anchylosed, tender, cartilages grated upon movement of the joint; was unable to bear his weight upon it. At this time I began the daily use of hot air, applying the apparatus for thirty minutes each day, with passive motion at the end of each treatment. The degree of heat which was more comfortable and quickly relieved the pain was about 300 degrees F. At the end of the first week the joint was less painful, had much more motion, and was in every way better. At the end of three weeks he was discharged cured, and since that time has gone about his business without pain or inconvenience.

J. H D., male, aged 28, ensign U. S. N. Injured left knee on board ship, May, 1897. Was at once sent to the hospital and treated by rest, massage and plaster dressings till October 15th, when he was granted three months' sick leave and came to this place. The joint was at that time swollen, tender, and walking was very painful; used crutches, and had from May last. I treated him with hot air once a day, and in fifteen days his pain was gone, he had laid aside his crutches and began to walk an hour each day, gradually increasing the time to four hours each day. This causing no pain or trouble, he reported to the department for duty. He is now standing his watches, four hours each, with no pain or trouble of any kind.

M. B., female, aged 21. In October, 1897, was struck over middle third of left tibia by a loose board over which she tripped. No attention was paid for a day or two, as it was thought to be only a slight bruise of no consequence. The third day after the injury pain began in the part, with some swelling along the shaft of the bone, and much tenderness. She consulted her physician, who gave her some sort of external application, which she used. As she grew gradually worse this was changed from time to time, but with no benefit. During the holidays she came into my care, and I found a doughy, tender and swollen ridge along the anterior surface of the shaft of the left tibia, extending from the tuberosity to the internal malleolus. I made diagnosis of chronic periostitis, and began the use of hot air for thirty minutes, running the temperature up to 330 degrees F. After five treatments the pain was pretty well relieved, and at the end of fifteen days I discharged her cured.

J. H., male, aged 50, injured right knee in getting off street car in October, 1897. Three days afterward joint was very much inflamed, was unable to walk, and pain was so severe as to demand opiates. Was kept in bed a week with evaporating lotions to the knee, and at the end of that time leg was put in plaster, and kept in cast for six weeks. Had pain all the time, and when cast was removed no improvement was noted. We began to use hot air for thirty minutes each day at 300° F., and at the end of seventeen days the pain was entirely gone, and patient laid aside his crutches and went about as usual.

Each case I have treated by this method has given me more confidence in it, not as a cure-all, but as a very valuable adjuvant in the treatment of chronic and deep-seated inflammatory affections of the joints and soft parts. The apparatus used is made by Frank S. Betz & Co., Chicago, Ill.—*Iowa State Med. Journal.*

A NEW CATHETER.

THE inherent uncertainties in the cleansing and sterilization of such instruments as catheters, vaginal and wound irrigators, etc., which are often for long periods of time in close contact with highly infectious material, has led M. B. Freund to experiment with a mode of construction which seems to obviate the difficulties. Instead of closed tubes of narrow lumen forming ideal lurking-places for dirt and contaminating elements, his appliances represent a little more than half of the usual instrument, split lengthwise. This leaves simply a long open gutter, all of whose edges and angles are rounded and accessible, and which may be rendered sterile by chemico-mechanical means, without the use of heat, a thorough scrubbing with soap and water, followed by a washing with bichloride solution, lysol or alcohol, sufficing to render it absolutely germ-free. In point of practicability the instruments of this design were found to be in no way inferior to those of closed calibre, a stream of fluid flowing freely along the groove and showing no inclination to leave it. Catheters with a cylindrical extremity, the groove not running quite to the beak to facilitate introduction, acted perfectly in drawing the urine, and the various irrigators that were tested were equally satisfactory. The instruments described were of hard rubber or metal.—(HABKANAH, "Chirurgisch-gynäkologische Praxis," "Volkmann's klinische Vorträge," No. 226, October, 1898.)—*Med. Record.*

DR. W. P. DUCK, of Preston, died of pneumonia on the 20th ult., after a short illness. By his death the County of South Waterloo loses one of its foremost citizens, and the Conservative party a staunch supporter. He was chairman of the Preston School Board, and was noted for his large-heartedness and sincere friendship.

Proceedings of Societies.

ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

THE twenty-sixth annual meeting of the American Public Health Association commenced at 10.30 a.m., September 27th, 1898, in the Parliament Buildings, Ottawa. The President, Dr. Charles A. Lindsley, Secretary of the State Board of Health of Connecticut, occupied the chair and called the meeting to order. The members present were: Drs. A. W. Cantwell, Davenport, Iowa; Frank W. Wright, New Haven, Conn.; James S. Wardlaw, Galt: Irving A. Watson, Concord, N.H.; E. Wende, Buffalo: Crosby Gray, Pittsburg, Pa.; Franklin C. Robinson, Brunneck, Me.; John Sweetland, Ottawa; Dr. Sarah Sparks, Ottawa; C. O. Probst, Columbus, Ohio; F. Montizambert, Toronto; Henry Mitchell, Asbury Park, N.J.; Adolph Gehrmann, Chicago; Louis V. Cubana, Fall River, Mass.; Charles H. Keefer, Ottawa; Charles A. Hicks, Fall River, Mass.; James Patterson, Winnipeg; W. J. Lumsden, Elizabeth City; W. H. Walton, United States Navy; J. M. Hunter, Indianapolis; John W. Russell, Concord, N.H.; R. D. Kahle, Sykesville; J. L. Leal, Paterson, N.J.; C. H. Herald, Newark, N.J.; Richard N. Connelly, Newark, N.J.; Clarence T. Van Diren, Harrison, N.J.; J. A. Exton, Kearney; A. W. Shaffer, C.E., Raleigh, N.C.; David W. Chandler, Newark; J. J. Gibson, V.S., Dennison, Ia.; Mrs. J. J. Gibson, Dennison; G. P. Conn, Concord, N.H.; F. X. St. Jacques, Ottawa; Rev. Father Constantineau, Ottawa; Rev. Dr. Moore, Ottawa; F. H. Powell, Ottawa; George Burn, Ottawa; James Mather, Ottawa; Sir James Grant, Ottawa; Hon. R. W. Scott, Ottawa; J. R. Allan, Ottawa; C. Berkeley Powell, M.P.P., Ottawa; N. A. Belcourt, M.P., Ottawa; Thomas McFarlane, Ottawa; Geo. Logan, Ottawa; ex-Mayor Borthwick, Ottawa; P. H. Bryce, Toronto; Edward Leciaga, Mexico; G. H. Durgen, Boston; F. C. Robinson, Brunswick, Maine: Jose Ramirez, Mexico; Roman Ramirez, Mexico; R. M. Bucke, London; Albert L. Gihon, New York; Henry Mitchell, Trenton, N.J.; H. B. Holbrook, Charleston, S.C.; George Rohé, Maryland; B. Lee, Philadelphia; Wallace, Russell; C. L. Wilbar, Lansing, Mich.; J. O. Brown, Pittsburg; C. D. Hick, Fall River, Mass.; Small, Fall River, Mass.; T. C. Walton, Naval Laboratory, Brooklyn; Jose Manuel Septiem, Mexico; A. Robillard, Ottawa; E. Pelletier, Montreal; E. P. Lachapelle, Montreal; H. R. Gray, Montreal; J. A. Beaudry, Montreal; F. J. Curtis, Albany; J. J. Mackenzie, Toronto.

The report of the Executive Committee was received, and showed thirty-five recommendations for new members.

A resolution was adopted favoring the appointment of a commission of United States, Canadian and Mexican medical men to endeavor to have the Bertillon system for the classification of diseases adopted in the respective countries, and as far as possible to unite with European countries that use this system.

The first paper was one by Dr. R. M. Bucke, on "A System of Sewage Disposal at the Asylum for the Insane at London, Ont." Owing to the author's absence, Dr. P. H. Bryce read the paper. The system of disposal of sewage at London is the land system. About seventy-five thousand gallons a day are pumped into a field and spread in two and a half hours' time. In six hours the sewage is entirely absorbed, and no pollution of the ground occurs. Vegetables and fruit are grown to the extent of $200 per acre

Mr. Thomas MacFarlane, F.R.S.C., chief analyst of the Inland Revenue Department, read a paper on the disposal of sewage in some European cities. Mr. MacFarlane, who has examined all systems, said that in London, England, the sewage is treated by a precipitation process. The liquids and solids are separated, and the latter are taken out to sea. This costs $600,000 per year. The land system is in use in Berlin with good results. A moss litter filter was advocated, as it can be burnt afterwards.

"The most Recent Methods of Sewage Disposal, and their Application to certain Cities in Ontario" was the title of a paper read by Mr. C. G. Horetzky, C.E. This paper was the same as read at the Ontario Health Officers' Convention.

The paper of Capt. W. E. Vanbuskirk, C.E., on "The Filtration of Sewage," was also read. A short discussion ensued on all the papers.

Prof. F. T. Shutt, M.A., read a paper on "The Farm Well," which was also discussed for a short time, when adjournment took place.

The afternoon session opened sharp at 2 o'clock, with a very representative gathering.

The first business taken up was a paper by Dr. John L. Leal, Health Officer, Paterson, N.J., on "An Outbreak of Typhoid Fever, Due to an Infected Public Water Supply." The paper dealt with the pollution of the water as supplied the residents of Paterson, N.J. He said his reason for reporting the following outbreak is that it seems to aid in establishing the fact that a single case of typhoid fever may infect even a large body of water, so as to reproduce itself among those dependent upon the same body of water for their public supply, even though the said supply be taken at a point some distance from the point of infection. The cases of typhoid developed as follows: During the last half of September, 26 cases; October, 4 cases; November, 103 cases; December, 58 cases. The disease was evenly distributed throughout the city, except in one district, containing about two thousand

people, and among all classes of the inhabitants. No possible common means of infection could be found except the public water supply, upon which all of those affected, with the possible exception of two or three, were dependent for at least a portion of the twenty-four hours. The only sections of the city, which did not contain a single case, were not furnished with a public water supply. The water is taken from the Passaic River. No evidence was shown above the falls of harmful pollution. Below the falls chemical evidence of harmful pollution was found. This river had been more or less continuously infected by cesspools from Sept. 1st until Nov. 24th, when the discharge pipe was discovered, and further infection from that source prevented. A short discussion took place which did not bring out any further information.

Dr. P. H. Bryce, Chairman of the Committee on the Cause and Prevention of Infectious Diseases, presented a very extensive report, in which he gave much valuable and entirely new information on the subject. He said that infectious diseases fall into several divisions, just as classified plants, both as regards their mode of causation and their growth and development. The subjects with which the Association deals to-day, however, were not to any great degree those which troubled them fourteen or twenty years ago, excepting perhaps about mere germ itself. About smallpox we seem to have learned pretty much, and vaccination and compulsory isolation, with effectual cleaning, ends the matter. Six weeks is set down as the extent of isolation. The same might be said of scarlatina, except that the working physicians and medical health officers now found it very difficult to accept the still accepted rule of English hospital practice of isolation of a minimum of forty days. As regards the methods for suppressing the outbreak of diphtheria in a community, further experience in Ontario during the past year has shown that the following seems the most effective and prompt means of stamping out an outbreak: In a number of municipalities where the disease appears—as it does principally amongst school children—the practice was introduced of a morning visitation by the sanitary inspector to all the Public Schools, to obtain a list of the day's absentees. The homes of these were promptly visited, and when any evidence of malaise and sore throat was present the parents were at once required to send for the family physician, and have a swab taken out and forwarded to the medical officer by the same afternoon. These are sent at once by mail to the Provincial laboratory, and the patient isolated until an answer is received by telegraph. Where the case proved to be diphtheria the patient was isolated until further examination proved the freedom of the throat from bacilli. The children of the household were kept from school and the public, and the home disinfected. The progress of medical knowledge had been very rapid during the past year, and, said Dr. Bryce, this report would not be complete without some reference to it in regard to the inoculation and dissemination of and to the

prevention of tuberculosis. The report concluded by drawing attention to the danger that arises in residing in houses in which consumptives have lived, and, in his opinion, these residences should either be entirely renovated from top to bottom or pulled down.

"What Constitutes an Epidemic?" was a paper read by Dr. Benjamin Lee, Secretary of the State Board of Health of Pennsylvania. The paper proved to be an excellent one, and combined with the questions of importance were many humorous situations which caused much amusement and laughter. The ordinary definition of epidemic, he said, was that a disease was epidemic when a number of persons are taken down with it at the same time. The answer to the question the Medical and Surgical Association of New Orleans gave was that the disease should be declared epidemic when the number of cases should reach these proportions: For a population of 100, 5 per cent.; for 500, 4 per cent.; 2,000 to 3,000, 2 per cent.; 5,000 to 10,000, 16 per 1,000; 20,000 to 50,000, 8 per 10,000; 50,000 to 100,000, 4 per 10,000. At one time when yellow fever was epidemic in New Orleans the Board of Health denied that it was epidemic, doubtless basing their decision on the above arithmetical standard. Dr. Lee claimed that if a dozen cases occurred in rapid succession from one, rapidity of speed should be solely considered. The Board of Health which, having knowledge of such conditions, purposely conceals it, or still worse, denies it, is guilty of a crime of hideous proportions; none the less so because it is acting in obedience to the behests of the business portion of the community, or from a mistaken sense of local patriotism. A discussion followed these papers, in which a number of the medical men took part. The questions appeared to interest the members greatly, and a large number took advantage of the opportunity to discuss them.

"The Urgent Need of Sanitary Education in the Public Schools," by Mrs. Ellen H. Richards, Institute of Technology, Boston, occupied the attention of the members for the next few minutes. The paper was read by Dr. Henry Mitchell, Asbury Park, N J. In opening, Mrs. Richards says that if any one lesson stands out more prominently than another, as taught by the experience in the recent war with Spain, it is that the average American citizen has not accepted the teachings of sanitary science as a part of his creed. At this time of the year, continues the lady, when every State in the Union is suffering its loss of men from preventable disease, and is paying larger sums of money for sick soldiers than was paid for the support of the fighting men, there is a good opportunity to preach the gospel of preventive medicine. Why should our soldiers have believed that it made any difference what water they drank, when they had been accustomed to the conditions prevalent in nine-tenths of the school yards in this country? Why should the men have taken care to keep the decks of the transports clean, when they have been accustomed to dirty school-

room floors, yards and streets all their lives? Clean school-houses, clean streets and special education cost money, which the officials claim that it is impossible to get, but the fact should be brought home to the community that the needless sickness and death among our soldiers would have paid for cleaning every school in the land, and the pension money will be more than enough to keep them clean. After enumerating several cases in reference to the above, Mrs. Richards said, that the volunteer's ignorance of food values and food preparation was even greater than his ignorance of the most evident of sanitary principles. Good cooking would have undoubtedly postponed, if not prevented, the outbreak of fever. The troops should have instruction in camp cookery, as a feature of the annual encampment. It is evident, she said, that the luxurious habits of the average Americans have weakened their stomachs, so that much time and out-of-door exercise are necessary, before they can digest the wholesome army ration, no matter how good. The examination for the army should include the digestive capacity, for the man with the dainty appetite has no more place in the army than the man with a bicycle heart. The paper was not discussed.

"Theatre Sanitation," by Mr. William Paul Gerhard, C.E., New York, was read, but contained nothing new in reference to the subject, and no discussion ensued.

An adjournment was then made.

The formal opening of the Association was held in the evening in the City Hall before a large and representative gathering of the society of the capital, visiting medical men and their wives. Prominent in the decorations were the flags of the United States, Mexico and Canada entwined with one another, and throughout the meeting the trend of the speeches was the close relations which now prevail amongst the Anglo-Saxon race. Sheriff Sweetland occupied the chair, and on the platform with him were Hon. Sidney Fisher, Minister of Agriculture; Sir James Grant, his Worship Mayor Bingham, Rev. Dr. Moore, Ald. Black and President Lindsley of the Association.

Sheriff Sweetland opened the meeting in a short speech, in which he emphasized the importance of the Association and characterized it as the most important body that ever visited Ottawa.

Hon. Sidney Fisher, on being called upon, said it devolved upon him to represent the Dominion Government, in welcoming the visiting medical and health officers. This might be thought strange, but the reason was, that in his department came the quarantine system, the only service in the Dominion Government dealing with public health. He congratulated the Association on its success at this, its third convention in Canada, and said it was especially appropriate at a time when the bonds of sympathy and friendly relations between the United States and Britain were so strongly manifest. His Worship Mayor Bingham

extended a welcome on behalf of the city. Sir James Grant and Ald. Black also spoke.

Prof. Charles A. Lindsley, M.D., President of the Association, then delivered his annual address, which contained, amongst other things, a reminder of the progress made in medical science during the past few years. "We no longer fear," said he, "those terrible pestilences such as three hundred years ago swept off half the population of Christendom. What wonderful achievements civilization has accomplished in this direction! Notice the deadly maladies which all of you have heard of, but which few of you, if any, have ever seen, because they have disappeared—positively disappeared under the influence of the civilization that we enjoy. Many of us have had personal observation of the plague of leprosy, of scurvy, of typhus fever, or yellow fever, and, I may also add, of small-pox. Civilization is an evolution: it is progressive, developing new features with every advance. Health organizations are themselves a development of civilization." He contrasted the man savage and the man civilized, and said it was one of the most remarkable phenomena in nature. He compared the physical condition of both species, showing the savage to be the equal of civilized man in interior construction, and that the latter, through the debilitating practices of civilization have become weakened and effeminate. So potent for evil consequences are these that the question is already discussed: Does civilization tend to the extermination of our race? Civilization had strong tendencies to sociability, and all habits, customs and aims were controlled thereby. All had seen that in cities civilization was formed and fostered. He strongly contrasted city and country life, and quoting from what the poet Cowper says, "God made the country and man made the town," told how in densely populated places, vice, poverty, epidemics of contagious diseases and want and ignorance abounded. He spoke of the protection afforded all classes of the needy public, and said it was becoming more recognized every day that the duty of a government was to protect public health. Except in a few instances, and only in cities, the best methods of practical sanitation for the people were yet required in America. England led all other countries in public sanitation. In Canada, Mexico, and in many States of America, he said, they are illustrating (as yet imperfectly) an ideal system. They have a central organization, a Provincial or State Board of Health, a Local Board and a health officer for each city or town in the Province or State. The central Board is the head, the health officers the hands. The speaker dwelt at some length on this system of looking after the health of the public, which, in his opinion, was an excellent one, and said the public intelligence should appreciate the value of it. In reference to the officers of the Board, he said they should give their undivided attention to their official duties. No physician could practise in the community in which he serves as health officer without a conflict of personal with public interests. He advocated

a public chemical and bacteriological laboratory, and said a central Board was not fully equipped without one. In closing he again drew attention to the Public Health Boards, and said their work must go on, nurtured, sustained and guided by skill, judicious enterprise and intelligent energy, until in practical utility and successful results they would have no superior among the nations of the earth.

The second day's session of the American Public Health Association met at 10.30 a.m., September 28th, in the Railway Committee Rooms, Parliament Buildings, President Lindsley in the chair. There was a good representation present, and the Executive Committee announced the acceptance of nine new members. The Executive also announced an addition to the resolution adopted yesterday recommending the adoption of the Bertillon classification as follows: "*Resolved*, That the Governments of the United States, Mexico and Canada be likewise requested to make this classification the basis of the mortality statistics of the census of 1900 and 1901. It was also resolved that the American Public Health Association approves the general principles and plan of procedure, relative to the periodical revision of the Bertillon classification of causes of death, as submitted by the Committee on Demography and Statistics in their Sanitary Relations. Another resolution read: "That commissions of three members be appointed by the President of the American Public Health Association at this meeting, subject to the approval of the Executive Committee, from each of the countries represented in the Association, to act jointly with each other and with similar commissions from other countries in the revision of the Bertillon classification of the causes of death, and that said commission shall be authorized to adopt such necessary rules, in conjunction with other countries associated in the work of revision, as shall be necessary for its successful conduct. They shall also report progress to this Association at each annual meeting, and this shall be continued until the work of revision is completed and their successors selected for the next periodical revision."

Prevention of Yellow Fever.

Dr. Henry B. Horlbeck, Health Officer of Charleston, South Carolina, Chairman of Committee, presented the report on the "Etiology of Yellow Fever." The report dealt with the work of the committee since their appointment at the last meeting. They had conferred with President McKinley on the matter, and were successful in having a committee appointed by Congress from the army and navy and civilian life, who have thoroughly investigated the disease as far as possible, and will continue to do so. Continuing, Dr. Horlbeck said: "Dr. Dominguez Freire, of Brazil: Drs. Richardson, Charrin, Carmona-y-Valle, Fenley, Delgade, Gibier and Havelberg have all claimed the discovery of a bacillus, or microbe, that was pathogenic to yellow fever. While a number believe the

bacillus icteroides to be the true origin and source of the disease, conviction is not assured. In a laboratory at the lazaretto, on the Isle de Flores, Dr. Saurelle found an organism, differentiated it, tested it, and named it bacillus icteroides, and presented it to the bacteriologists of the world. This microbe has been studied, and is on its passage to oblivion among the pathogenic bacilli. Many believe that the long-wished discovery has been made, but much work is to be done before a certainty is realized. After citing a number of cases of the authority before mentioned, the report went on to say that from the above series it will be seen that in the fifty cases of yellow fever, agglutination with cessation of motion was obtained in over 70 per cent. of cases, the reaction being as characteristic as in typhoid fever cases, and they say from this that the work demonstrates the practical value of serum diagnosis. It may be utilized as early as the second day, and be exceptionally present as late as nineteen years after the disease. The paper was very lengthy, and enumerated a large number of cases in which the disease was shown in different forms.

Dr. Gihon, late of the United States Navy, read the reports of Dr. Eduardo Liceaga, President Superior Board of Health, Mexico, who was not conversant with the English language. The reports went into the question of yellow fever, as found in Mexico, in a very extensive manner, and discussed how the fever has been imported from Cuba into Mexico. The report was discussed briefly.

Dr. Ernest Wende, Health Officer, Buffalo, N.Y., presented the report of the Committee on the "Cause and Prevention of Infantile Mortality." The report stated that the committee's work had been unsatisfactory for several reasons, although instructive in certain features. Very few replies had been received to the thousands of circulars for information which had been sent out. The great fault in small places was the trouble caused by the change of officers and the carelessness in the means of protecting the helpless. Vigilance regarding the milk and water supplies had done much to lessen mortality. Much satisfaction is found in the general condemnation, theoretically at least, of the long tube, death-dealing, nursing bottle. He thought that the committee should be continued, so as to be able to procure additional information. On resolution the committee was continued.

Dr. Suiter, of Herkimer, New York, moved, "That in receiving and adopting the report of the Committee on the 'Causes and Prevention of Infantile Mortality,' this Association places itself on record in the following resolution: *Resolved*, that it is the sense of the American Public Health Association that all State, city and town health authorities and medical societies generally, should exercise every possible effort to procure the enactment of laws in their respective cities, villages and towns to prohibit the sale of the so-called long-tube nursing bottles, as being a perniciously active agent in the causation of preventable disease of infancy of the most serious character."

The resolution was referred to the Executive Committee.

"Some Observations from Practical Experience with Bovine Tuberculosis in New Hampshire" was the subject of a most interesting paper by Dr. Irving A. Watson, President of the State Board of Cattle Commissioners and Secretary of the State Board of Health. The doctor presented the following conclusions: That it is impossible to eradicate bovine tuberculosis, but it may without inflicting too great a burden on the State be reduced to a degree that will subserve the interests of the stock-raisers and likewise protect the public health; that but a very small percentage of the animals infected with tuberculosis in any way endanger the public health, and that an indiscriminate slaughter of the cattle reacting to the tuberculine test is wholly unnecessary, inasmuch as many of them either recover or the disease is permanently arrested; that a proper sanitary condition of stables and stable enclosures would do more toward preventing the spread of bovine tuberculosis than any other measure that could be adopted; that the danger of infection from bovine tuberculosis may be reduced to very small proportions, if not wholly eradicated, by sanitary measures, inspections and physical examinations by the State, in co-operation with local authorities, and that such inspections once inaugurated could be maintained without an expense that would be burdensome to the State.

Dr. A. D. Schweinitz, Chief of the Bureau of Animal Industry, Washington, D.C., read a paper dealing with the matter in another form. The paper was interesting from a technical standpoint, and a general discussion ensued, which was taken part in by a large number of the members.

When the session of the American Public Health Association adjourned at 12.30 o'clock, the members, accompanied by their wives and members of the Citizens' Committee, boarded electric cars and were transferred to the village of Aylmer, on the shores of Lake Deschene, where the steamer was taken and a most delightful trip to the Chats Rapids enjoyed. The day was perfect, and for the month of September its equal has not been known for years. On the boat an orchestra was stationed, and as the magnificent steamer glided through the placid waters of that beautiful lake they rendered Canadian, American and Mexican patriotic airs in a delightful manner. The Mexican delegation in attendance at the convention enjoyed the pure Canadian atmosphere very much, and were loud in their praise of the beauties of the country. They speak French as well as Spanish. These gentlemen travelled six days to attend this meeting and have added many valuable papers to the transactions of the Society. The boat went the distance of twenty-five miles, and then made the return trip just as the sun was sinking in the west. This sight was a most beautiful one, and the lovely purple tints of the Laurentian Mountains were the admiration of all. Arriving at the Hotel Victoria, a most elaborate banquet was partaken of, tendered

by the citizens of Ottawa. Over two hundred were present, including Hon. Sidney Fisher, representing the Dominion Government; Eduardo Liceaga, representing Mexico, and Lieut.-Colonel Charles Turner, United States Consul-General.

The session began at 10.30 a.m., September 29th, Dr. Benj. Lee, of Philadelphia, Vice-President, in the chair. The Executive Committee reported their decision not to adopt the resolution offered on September 28th in reference to interdicting the so-called long-tube nursing bottle, and their action was endorsed.

Dr. Henry D. Holton, Brattleboro', Vt., presented the report of the finances of the Association. The report was referred to an Auditing Committee, composed of Drs. Watson, Wright and P. H. Bryce. The report showed that the finances were in excellent shape, and that the Association had passed through a prosperous year.

Dr. Manuel Septiem, of Queretaro, Mexico, read a very exhaustive paper, entitled "Compulsory Vaccination Ought to be Imposed as a Paramount Necessity." It is unfortunate, he said, that neither the people nor the Government of the people have known how to take advantage of the immense good which vaccine is capable of producing. Small-pox ought to have disappeared long ago from civilized nations, and the people ought to carry on their arms as a shield those everlasting stigmas which vaccination leaves. He regretted to see that in several places there was an apathy towards vaccination, and attributed it to cases of vaccinal ulceration. Compulsory vaccination could not be carried out from the year 1876 till 1884, and in 1885 such a strong epidemic broke out that in nine months in the city of Montreal alone thousands were attacked with small-pox, causing the death of 3,500 persons. A Pullman car conductor arriving from Chicago, where he had contracted the disease, was the vehicle of infection. It is in Germany where vaccination is most extensively practised, and there are physicians who have never seen a single case of small-pox. The disease has disappeared from the German army since they have submitted to re-vaccination. He submitted the following project for the consideration of the Association: To direct a petition to the Governments of the three nations represented here in order that they provide more energetic laws than now exist, making vaccination obligatory and providing severe punishment for those who do not obey. The report was very voluminous, and at the conclusion an interesting discussion took place. The general opinion appeared to be that vaccination should be practised more generally.

Dr. Charles L. Wilbur, Chief of Vital Statistics, State Department, Lansing, Mich., presented the report of the Committee on Demography and Statistics in their Sanitary Relation. He said the progress of the classification recommended, that known as the Bertillon system, has been so rapid in the last few months that a supplementary report was necessary to bring the history of the movement down to the present date and to provide for its further

extension. No less than twelve American States have formally adopted it since the beginning of the present year, namely, Connecticut, Indiana, Maine, Maryland, Michigan, Minnesota, New Hampshire, North Carolina, Pennsylvania, Rhode Island, Vermont, and Wisconsin, besides which several others are only waiting for the action of the Association. It is the official system in use both by the Province of Ontario and the Province of Quebec, and it was regarded as a matter of congratulation that Drs. Bryce and Lachapelle had recommended its use by the Dominion Government in the approaching census of 1901.

The formulation of a plan of international union of the countries using this system whereby revisions could be made when necessary, occupied a considerable part of the report. The necessity of immediate action was strongly urged, in order that the revised classification might be available for use in 1900, and the committee gave a practical example of the celerity which they recommended by stating that the plan of revision proposed, which was not drafted until after the conference of the Boards of Health at Detroit, had already been submitted to the highest statistical authorities of France, and their cordial approval and the promised co-operation of the French statistical service obtained. Correspondence is being conducted with the registration offices of Europe and South America, and arrangements have been made to announce the results of the revision at the session of the International Congress of Hygiene and Demography at Paris in 1900. The plan provides for consultations of pathologists, sanitarians and all persons making use of mortality statistics, as well as the registration offices, and the decision as to changes from the present form is to be determined by ballot of the registrars actually engaged in the preparation of such reports. As Dr. Bertillon writes: "The American Public Health Association, in adopting a uniform nomenclature of diseases, realizes a considerable statistical advance, which the statisticians of Europe have sought without being able to obtain since 1853, the date of the first International Congress of Statistics at Brussels. The question was there presented, but it is only in 1898 at Ottawa, that it could be solved." The following committee was appointed in the matter: Canada, Dr. P. H. Bryce, Dr. Lachapelle; United States, Dr. Wilbur; Mexico, Dr. E. Liceaga, Dr. Roman Ramirez.

Dr. Jose Ramirez, of Mexico, presented a report, entitled "Ought We to Re-open the Leprosy Asylums?" Leprosy is still scattered throughout the world. As its origin is not of a Teutonic character, we can understand how it invades the climates of widely different characters. It is a disease exclusively confined to man, of a bacterial character, contagious, and one that respects no race whatever. He then alluded to the disappearance and reappearance of the disease in various countries, making it serve as a thermometer to indicate the degree of hygiene of the different peoples. These facts lead us to a conclusion that leprosy, an incurable disease, can

be suppressed in civilized countries by means that are within the reach of the sanitary authorities. An observation of some centuries has perfectly demonstrated the contagious character of leprosy (still denied by some physicians), and the arbitrary measures that up to the Middle Ages were employed to prevent this fearful contagion, proved by the positive results that these observations were correct, that is to say, the isolation of the leper was the most certain method of preventing the appearance of fresh cases. The disease, the doctor thinks, is not hereditary. The long-accepted theory that children inherit it from contaminated parents had been disproved, and the fact holds out greater hope for the future. The disease, he continued, has very rarely been found in Canada, although well-established cases have been seen. In the United States there are a few small foci, which are especially found in Louisiana, Texas, California, Minnesota and Oregon, but the recent annexation of the Sandwich Islands places the United States in an especial condition to at once undertake some measures of defence against that immense focus of leprosy which is so well known and is so dangerous. In Mexico we also have leprosy scattered in different States; we therefore find that Canada on account of the British colonies of India, the United States on account of the foci in its own country and the recent annexation of the Sandwich Islands, as well as Mexico on account of the numerous foci it contains, are three nations which ought to come to an agreement with a view to taking steps against the propagation and for the establishment of uniform measures of prevention, as far as is permitted by the special condition of each country.

Mr. J. W. Hughes, Montreal, presented the report of the Committee on Sanitation, with special reference to drainage, plumbing and ventilation of public and private buildings. The report was very extensive and was freely discussed.

The afternoon session opened at three o'clock, Dr. Benjamin Lee, Philadelphia, First Vice-President, in the chair. Owing to Mr. J. W. Hughes, of Montreal, being obliged to leave for home to-day, his paper on "The Intercepting Trap in Private Sewers," was read. Mr. Hughes unhesitatingly condemned the fitting of the intercepting trap in private sewers. Minute investigation has shown that when an intercepting trap was used it not only modified the speed and partly obstructed the flow of sewage, but it prevented any of the air carried down by the soil and other waste water pipes from discharging into the street sewer, where its aerating functions are so necessary to commence the purification of the sewage in the drains and assisting in preventing sewer gases generating in the sewers. It has also been shown that when the main intercepting trap is omitted there is a superior and self-cleansing flow of sewage, and that large volumes of air pass through to the street sewer, creating a healthy atmosphere and circulation of air down the soil-pipe through which the fluid is passing, and up other soil-pipes that are at the time standing idle. Mr. Hughes said that his

observation had led him to believe that in houses in which there was an absence of sewer pipes having obstructing traps there was freedom from odors and diseases that could be traced to sewer gas poisoning, while on the other hand those cities which had adopted the principle of intercepting traps, were often quite the reverse, and a great deal of disease was found among the inhabitants who happened to live in modern-built houses when the obstruction system had been installed, and this in spite of the fact that the same towns had spent large sums of money in flushing drains and artificially ventilating the street sewers, a thing which is never necessary if the sewers are laid down properly and the straight, unobstructed system is adopted.

The next paper was also admitted on sufferance, it having been on the programme for September 30th, but being to a large extent on the same subject as the previous one it was admitted as a matter of discussion. The paper was by Dr. Durgin, of Boston, Mass., and in it he endeavored to show that bad gas fittings were more dangerous to health than bad plumbing. He made reference to the danger from illuminating gas and the need of wholesome regulations and careful inspection to secure better construction and repairs for gas pipes and gas fixtures. He did not wholly deplore the popular fear of sewer gas, but he had to affirm that there was no scientific basis for regarding it as an active poison or a serious source of danger to human life. Continuing he said: On the other hand, it must be said without hesitation that illuminating gas contains a most active and deadly poison. No deaths, he said, are reported from sewer gas, but many are reported from illuminating gas. In Boston 169 deaths had occurred through the latter agency in the last five years. Such deaths were reported only when no doubt existed as to the cause and effect. That innumerable cases of slow poisoning, with the attendant disturbances of health and comfort, do occur was believed by the medical profession, but such cases did not appear upon the public records. He believed that they should maintain that simple coal gas, dangerous in itself to health, was a great menace to health when conjoined to the many small leaks in the gas pipes and fittings sufficient to make it inexcusable for the health officer to refrain from giving at least as much attention to gas pipes and fixtures as is now given to the plumbing and drain pipes.

Dr. Juan Brena, Zacatecas, Mexico, gave a few "Rough Notes on the Etiology of Typhus Fever." The paper was very lengthy and the doctor could not finish it in the time limit. He said that in preparing the paper he had borne in mind that the chief object of the Association was the prevention of disease by the improvement of sanitary legislation, and that such an important matter covered the field of all medical knowledge. The idea of isolating the patients suffering from the disease might, he said, be considered as purely empirical, and contained a proof of our state of ignorance rather than of our advancement.

Dr. J. N. Hurdy read the report of the Committee on the Ventilation of Railway Cars, which proved a very acceptable communication, as the information given was in reality a victory of the Association after a number of years' work in inducing several of the big railroads in the United States to adopt sanitary arrangements in the running of the cars in respect to the equipment and general arrangements. The railroads in question are the Big Four and the Pennsylvania, the former a system of some 3,000 miles and the latter over 6,000 miles. Official letters were read from the company to the chairman of the committee, informing him that they had taken into consideration his suggestions, and their cars were now undergoing sanitary improvements, in accordance with his wishes. The officials stated that they intended to reconstruct all their cars so that cleanliness would be a most important feature. Movable seats, plain interior with disinfection daily and healthy heating are the principal features. The air is drawn from outside the car through ducts, is then passed over steam radiators between the floors and then introduced into the car under the seats. This avoids warming over and over the dead air in the car. The bad air goes out through an opening in the roof.

"The Administration of the Adulteration Act in Canada" was an excellent paper by Dr. F. X. Valade, of Ottawa. In opening, the doctor said: "The theory of microbes as the causes of diseases being now admitted as an established fact, attention is directed to their mode of conveyance through the organism. On examination foods and drinks were found to be the general channel through which these microscopical beings migrate to the organism where they implant themselves, grow and multiply with prodigious rapidity." Continuing, the doctor said that Canada, always alive to the questions of public health, did not overlook the important question, and passed an Act for the inspection of foods and drinks. This Act provided for the appointment of competent analytical chemists, who carry out its provisions. The instructions received by the food inspectors are issued by the central laboratory, and foods and drinks are collected and delivered to the analysts.

Dr. Gregorio Mendizabel, Mexico, gave a very interesting paper on diseases of the skin and of the hair and scalp, which are commonly transmitted by contagion at schools, and the way of preventing them.

The closing discussion of the day was on the methods of using disinfectants in cities.

The Advisory Council presented their report, which contained the recommendations of the officers for the ensuing year and the appointment of the next place of meeting, which was adopted. The officers are as follows: President, Dr. George H. Rohé, Baltimore; Vice-Presidents, Dr. Henry Mitchell (Asbury Park, N.J.), Dr. Jesus Monjaras (Sanluis Potosi, Mexico); Secretary, Dr. C. O. Probst, Columbus, Ohio; Treasurer, Dr. Henry D. Holton, Brattleboro', Vt. The selection of the next place of meeting was ratified, and the

next session will be held early in November next year in Minneapolis. Executive Committee—Prof. F. C. Robinson, Brunswick, Me.; Dr. Gregorio Mendizabel, Mexico; Dr. P. H. Bryce, Toronto; Dr. H. M. Bracken, Minneapolis; Dr. Irving H. Watson, Concord, N.H.; Dr. Frank W. Wright, New Haven. The only other place making a bid for the 1899 convention was Chicago. A telegram was received from Carter H. Harrison, Mayor, extending the invitation, but the Executive decided to go to the North-West.

THE PATHOLOGICAL SOCIETY OF TORONTO.

This society held its annual open meeting in the Biological Buildings, Queen's Park, 8.30 p.m., December 30th, 1898, the President, Dr. Primrose, in the chair. The attendance was large, as in addition to the members a good many city physicians and others from a distance were present. The programme was as follows:

(1) "Malignant Disease of the Esophagus," by Dr. H. A. Bruce. (2) "A Case of Hypertrophic Cirrhosis of the Liver," by Dr. J. E. Graham. (3) "A Case of Cirrhosis (fatty) of the Liver," by Dr. H. B. Anderson. (4) "Intestinal Diverticula," by Dr. John Caven. (5) "Ulcerative Endocarditis affecting Tricuspid and Mitral Valves," by Drs. A. McPhedran and R. D. Rudolf. (6) "Situs Inversus—a Specimen," by Dr. D. F. G. Wishart. (7) "Multiple Intussusceptions of the Ileum," by Dr. H H. Oldright. (8) "Fibrinous Effusion into Subdural Space," by Dr. A. Primrose. (9) "Accessory Right Bronchus in a Sheep," by Dr. J. T. Fotheringham. (10) "Eustrongylus Gigas in Kidney of Mink," by Dr. F. N. G. Starr. (11) "Skiagraph—Gunshot Wound of Foot—Specimen from Fatal Gunshot Wound," by Dr. G. Silverthorn. (12) "Rodent Ulcer at Edge of Orbit," by Dr. William Oldright. (13)—*a*, "Cerebral Softening, following Injury"; *b*, "Pachymeningitis Hemorrhagica Interna"; *c*, "Ruptured Uterus"; *d*, "Fractured Pelvis," by H. B. Anderson. (14) "Fibroma Uteri, with Hemorrhages from Twist of Pedicle," by Drs. I. H. Cameron and J. T. Fotheringham.

Papers, explanatory of the specimens they exhibited, were read by Drs. Bruce, Graham, Caven and Rudolf, respectively.

Dr. William Osler, of Johns Hopkins University, who was present, discussed the questions of hypertrophic cirrhosis and intestinal diverticula.

Dr. John Amyot exhibited, with the projection microscope, a series of slides, showing the stages in the development of tuberculosis in the lung, an adenoma, a series of simple carcinomata, squamous-celled and columnar-celled epitheliomata, pneumonia, hypertrophic and atrophic cirrhosis of the liver and melano-sarcoma of the liver.

Professor Ramsay Wright also exhibited a few sections of early human embryos. J J. C.

REPORT OF DEATHS FROM CONTAGIOUS DISEASES IN ONTARIO FOR THE MONTHS OF OCTOBER AND NOVEMBER, 1898.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

OCTOBER, 1898.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Scarlatina.	Rate per 1,000 per Annum.	Diphtheria.	Rate per 1,000 per Annum.	Measles.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum.
2,200,072	707	272	14	0.07	39	0.2	4	0.02	8	0.04	54	0.3	153	0.8
97%	94%													

NOVEMBER, 1898.

2,153,415	677	284	17	0.1	59	0.4	6	0.03	6	0.03	50	0.3	146	0.8
95%	91%													

Population of Province 2,263,492

Municipalities of Province..... 745

The Canadian Journal of Medicine and Surgery

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EDITOR,
69 BLOOR STREET EAST, TORONTO.

W. A. YOUNG, M.D., L.R.C.P.Lond.,
BUSINESS MANAGER,
145 COLLEGE STREET, TORONTO.

Surgery—BRUCE L. RIORDAN, M.D., C.M., McGill University; M.D. University of Toronto; Surgeon Toronto General Hospital; Surgeon Grand Trunk R.R.; Consulting Surgeon Toronto Home for Incurables; Pension Examiner United States Government; and F. N. G. STARR, M.B., Toronto, Lecturer and Demonstrator in Anatomy, Toronto University; Surgeon to the Out-Door Department Toronto General Hospital and Hospital for Sick Children.

Orthopedic Surgery—B. E. MCKENZIE, B.A., M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Surgeon to the Out-Patient Department, Toronto General Hospital; Assistant Professor of Clinical Surgery, Ontario Medical College for Women; Member of the American Orthopedic Association; and H. P. H. GALLOWAY, M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Orthopedic Surgeon, Toronto Western Hospital.

Oral Surgery—E. H. Adams, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

Medicine—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and W. J. WILSON, M.D., Toronto, Physician Toronto Western Hospital.

Clinical Medicine—Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine Toronto University; Physician Toronto General Hospital, St. Michael's Hospital, and Victoria Hospital for Sick Children.

Gynæcology and Obstetrics—GEO. T. MCKEOUGH, M.D. M.R.C.S. Eng., Chatham, Ont.; and J. H. LOWE, M.D., Toronto.

Medical Jurisprudence—W. A. YOUNG, M.D., L.R.C.P. Lond., Eng., Toronto.

Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, Resident Physician Toronto Asylum for the Insane.

Public Health and Hygiene—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon Toronto General Hospital; and E. H. ADAMS, M.D., Toronto.

Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S. Eng., Toronto.

Physiology—A. B. EADIE, M.D., Toronto, Professor of Physiology Woman's Medical College, Toronto.

Pediatrics—AUGUSTA STOWE GULLEN, M.D., Toronto, Professor of Diseases of Children Woman's Medical College, Toronto.

Pathology—W. H. PEPLER, M.D., C.M., Trinity University; Pathologist Hospital for Sick Children, Toronto; Demonstrator of Pathology Trinity Medical College; Physician to Outdoor Department Toronto General Hospital; Surgeon Canadian Pacific R.R., Toronto.

Laryngology and Rhinology—J. D. THORBURN, M.D., Toronto, Laryngologist and Rhinologist Toronto General Hospital.

Ophthalmology and Otology—J. M. MACCALLUM, M.D., Toronto, Assistant Physician Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. V. TORONTO, FEBRUARY, 1899. NO. 2.

Editorials.

THE DISINFECTION OF THE DOMICILES OF TUBERCULAR PATIENTS.

ATTENTION was drawn at the last meeting of the Provincial Board of Health to the disinfection of the domiciles of tubercular patients. After the matter had been fully discussed the following resolution was carried: "That in the opinion of the Board it should be made obligatory on physicians to report all cases of tuberculosis occurring in their practice; if a physician is not consulted, then this duty should fall upon the householder; that the Local Board of

Health should provide for the regular and systematic disinfection of the domicile in which the patient lives and should be notified of the removal of any tubercular case to a hospital or sanatorium."

This resolution is simply the logical outcome of well-understood medical facts. The mortality reports published in this journal show that more deaths result from tuberculosis than from all the other contagious diseases reported.

As tuberculosis is held to be a contagious disease, communicated principally by the dried sputa of phthisical patients, notification should be given of it just the same as of diphtheria, scarlatina, etc. Notification is the all-important step; that once made obligatory by law, disinfection of the domicile or apartment occupied by the patient, would naturally follow. Without notification the Local Board of Health will not disinfect, unless requested to do so. It is quite likely that arguments will be used against the legalizing of notification, and, if phthisical patients were consulted, so radical a measure would never be placed on the statute book. The reason is obvious; a patient, once pronounced tubercular by medical authority, is looked upon with dread and occasionally is obliged to change lodgings. Much of this hardship arises from a misconception in the public mind as to the means by which tubercular infection is spread. If the people knew exactly what to do and what to expect from the Local Health Board, the presence of a tubercular patient in a house would not be looked on with so much dread as it is at the present time. The only remedy for ignorance is instruction, and when people learn from their physicians how, when and where tubercular infection may be conveyed, they will not in any way abate their kindness to the afflicted, while they protect themselves from unnecessary danger.

In order to make people aware of the requirements necessary in managing a case of tuberculosis in a family, public meetings should be held in different parts of the Province, at which addresses on this subject could be delivered by members of the Provincial Board of Health and other prominent physicians. We do no think that too much should be left to the initiative of the local health officer; people should learn to do a little thinking for themselves. Owners of houses should, therefore, see that they are disinfected. People looking for houses or lodgings should demand, as a matter of right, a certificate of disinfection before moving in, and every landlord, letting a domicile, should be in a position to assure an incoming tenant, that his premises have been recently disinfected.

The regular and systematic disinfection of every house in a municipality would be a very practical, modern and effective system of preventing tuberculosis and should receive the earnest attention of physicians and their patients as well. J. J. C.

THE BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.

Saturday Night, January 7th, contains the following editorial: "The country papers are publishing an item to the effect that a Walkerton doctor sent two samples of mucus, one taken from the throat of a healthy child and the second from the throat of a patient, to the Government bacteriologist in Toronto for examination, and received a telegram in reply that both samples indicated diphtheria. No doubt the bacteriologist could explain his apparently erroneous finding if he were asked to do so; perhaps the mucus from the healthy child became contaminated in some way, but at least we may assume that he was not suspecting a trick, and has by experience found it advisable to add a little caution to exactness."

If a bacteriological examination of a sample of mucus or exudate from a human throat discloses the Klebs-Lœffler bacillus, has the individual from whom the sample is taken diphtheria? Not necessarily. This microbe may be present in his throat in a quiescent attitude, not attacking the epithelium, and of course not elaborating toxins. Having been exposed to an atmosphere containing this microbe, or the vicinity of persons suffering from diphtheria, such an individual, whether physician, nurse or playmate, may inhale the microbe and have it present in the mucus of his throat. As far as the bacteriologist is concerned, the sample reveals on examination and culture the microbe, which produces diphtheria. The clinician furnishing it is simply in a position to say, that the cause of diphtheria may be present in the sample of mucus, but that the individual, from whose throat it has been taken, has not diphtheria. And both are quite correct in their respective opinions. The mere existence of a germ in mucus, taken from a human throat, does not prove the existence of the disease, which may be caused by the active existence of the same microbe in the individual in question. The diplococcus of pneumonia has been repeatedly found in mucus, taken from the throats of persons who did not have pneumonia, and tubercle bacilli are occasionally pres-

ent in the nasal mucus of non-tubercular people, who have been exposed to the contagion of tuberculosis.

The fact that the Klebs-Lœffler bacilli can rest, in an innocuous condition, in the throat of an individual seems to prove: that diseased or altered conditions of the tissues of the nose or pharynx are necessary, or that the power of resistance, naturally possessed by the individual, must first be lowered, before these microbes can penetrate the epithelium and the lymphatic glands, and elaborate their toxins. These opinions, however, must be considered as strong conjectures rather than truths. It remains for the practitioner to show what are the vital conditions, which precede the development of diphtheria in a patient; clinical work of that scope and nature will confer an immense benefit, by helping to fully develop the prophylaxis of diphtheria. Bacteriology does not really require this defence, for the skill of its professors in elucidating the etiology of diphtheria has removed that disease from a confusing array of different anginas, while the discovery of diphtheria antitoxin has simplified its nebulous treatment and rescued the practitioner from a condition of despair.

J. J. C.

ORIGIN OF CHRISTIAN SCIENCE.

An English investigator has discovered that Christian Science does not possess even the first merit claimed for it, namely, an origin in the teachings of Christ in the New Testament. According to this authority, the Christian Science of to-day is merely a revival of Babylonian medical beliefs of three thousand years ago. The only change of importance is that God and Christ have naturally been substituted for the ancient gods or spirits. The Babylonian of three thousand years ago had the very common and widespread belief that Nature was a realm under the sway of two camps of spirits, one benevolent, the other malevolent. According as one or the other prevailed the Babylonian was well or ill. According to his belief there was a "noxious spirit of the lung," or "heart," or "eye," or whatever member or organ might be afflicted. His treatment, like that of the Christian Scientist of to-day, was to appeal to a more powerful spirit to drive the noxious one away. In this way the Akkadian tried to cure the "wasting disease," or "noxious sputa of the lips," which we call consumption; to repel fevers, which he called the "burning disease," or "the trampler,"

who respected neither high nor low, but "rested upon the body of slave and chieftain"; by this was meant the plague with which we are now familiar in India.

In their prayers the Akkadians would describe the symptoms of their disease and then ask to be relieved. Here, for example, is the prayer of Assur-nazir-pal the first, son of Samsi-Rimman (1800 B.C.); it was offered up to "the lady of Nineveh." Put into modern phraseology, the king described his disease as an eruption of boils, accompanied by diarrhea, causing a feeling of anxiety with loss of sleep and appetite, consequently he suffered from general depression and an inability to enjoy life. A literal translation of the prayer would run: "In what have I sinned against thee? Why hast thou allotted me diseases, boils and pestilence? Is this thy just decree? As one who did honor to thy divinity am I afflicted. If I have not considered sin and evil, why am I thus smitten? In my foundations I am unloosed, I am broken to pieces, and rest I find not on the throne of my kingdom. I fasted, and what feasts I had before I grew not near. The wine libation turned to gall. From rejoicing I am withered, and from the beauties and pleasures of life I am cut off. My eyes are sealed up. I do not lift them up from the surface of the earth. How long, oh, lady, shall the disease without ceasing destroy my members?"

The Assyrians used more than mere incantations, and in this they differ from the modern Christian Scientist. In Assyria the pine cone was considered to have power to restore health and avert evil spirits. It was administered by the "Christian Scientists" of ancient Babylon to the sick, who sucked the tip of it, thus transferring to themselves its healing properties. A bunch of grapes is used in Persia with the same object at the present day, and very probably the "grape cure" for consumption in certain parts of the Continent is a continuation of the same idea. Another point of distinction between the modern and ancient "medicine man" is this: When an ancient Assyrian called in a scientist to help cure him, the latter fixed his price for the prayers, etc., but the stipulation was made of "no cure, no pay."—*Toronto World.*

EXPERT MEDICAL EVIDENCE.

Saturday Night, January 7th, disparages medical testimony, and contends that it plays a less important part in criminal cases than it had begun to do. We do not accept our contemporary's opinion.

In disposing of a charge, which concerns the life of a prisoner, it is desirable that the fullest discussion should be given to all the facts submitted, more particularly when the facts, or apparent facts, admit of different interpretations, and it is no reflection on the skill, knowledge or honesty of medical witnesses, that their conclusions are widely different. A good many expert witnesses may give evidence sustaining a contention of the Crown, which may not be demonstrable by positive evidence of fact, and an equal number of witnesses for the defence may logically and truthfully hold to a totally different hypothesis. Such medical evidence is purely matter of opinion, whose value is to be decided by the jury, according to the credence they attach to such medical opinion, and this again will depend largely on the reputed skill and knowledge, of the respective expert witnesses. Absolute certainty is one thing, probability another, and it is unreasonable to suppose that experts must agree on only one interpretation of data, which admit of several different explanations. Besides, when all is said, our system of jurisprudence reposes on different interpretations, within reasonable limits, of the same data. From the clash of opinions light springs forth, and, after discussion, there is left a reasonable probability, even in obscure cases, that a true verdict will be given. J. J. C.

EDITORIAL NOTES.

Treatment of the Pernicious Anemia of the Puerperal Period.—A writer in *La Presse Medicale* says that pernicious anemia may develop during the course of the puerperium before the birth of the child as well as after birth or during lactation. To cure it one must not rely on iron, phosphide of zinc or hypodermic injections of quinine. The only medicine which has given beneficial results is arsenic. Arsenic may be given in three ways: by the stomach, by hypodermic injection and by the rectum. The administration of arsenic by the stomach is the method usually adopted; but it cannot be continued for a long time without exciting a feeling of burning in the stomach, loss of appetite and nausea, so much so that it is impossible to use the larger doses of the drug which are necessary in pernicious anemia. Subcutaneous injections cause local accidents, burning pains, and a temporary paralysis of the limb, whatever preparation is used, and in spite of all possible aseptic precautions. For these reasons Dr. Vinay, of Lyons, uses

injections of arsenic into the rectum. To overcome rectal intolerance, it is necessary to take the precaution to inject only a small dose each time. He uses the following solution:

℞ Fowler's solution ..... 60 minims;
Distilled water .....840 "

He injects 75 minims of this solution morning and evening at first; after four days' treatment he gives three injections a day, each containing 75 minims of the solution, in the morning, at midday and in the evening. When the last-mentioned doses are given, the rectal mucous membrane absorbs 1 gramme of Fowler's solution or about 1 centigramme of arsenious acid, and this dose suffices to produce a therapeutic result. But in particularly severe cases the quantity of Fowler's solution may be increased, and the following solution may be used:

℞ Fowler's solution..... 75 minims.
Distilled water .....675 "

The dose of arsenious acid is thus raised to 15 milligrammes each day in the three injections. Conjointly with the medical treatment the patient's diet should be scrupulously regulated, although the alimentation of patients of this class is not always easy. The foods which agree the best with the patient are eggs in the shell, poached eggs in bouillon, milk soups, milk, coffee, beef-tea, kephir, champagne frappé and scraped meat. Oxygen inhalations may be utilized, employing fifteen litres before meals. J. J. C.

Urotropin in Diseases of the Urinary Passages.—We notice in *La Presse Medicale*, that urotropin, which is spoken favorably of at the present time in Germany, as the favorite medicine in diseases of the urinary passages, appears in the form of white crystals with a weak alkaline reaction, and easily soluble in water. The watery solution is of an agreeable taste and is slightly sweetish, so that patients take it without difficulty. The therapeutic indications of urotropin depend on its antiseptic properties. Thus the urine of persons, who have taken urotropin, keeps its transparency for a long time, a fact which, as is well known, is not observed after the ingestion of other medicines, which pass out through the urinary passages. The indications of urotropin as a urinary antiseptic are found in all cases of infections of the urinary passages or of the urine, viz., in pyelitis, the catarrhal cystitis of the strictured, senile cystitis, prostatic disease, and especially in cases accom-

panied with ammoniacal decomposition of the urine. In all such cases, and principally in cystitis, urotropin assists the local treatment by producing an absolutely characteristic purification of the urine. As a preventive urotropin is indicated by Elliott in cases of paraplegia, ataxia, prostatic disease, stricture, and in short in all patients who are likely to be affected with cystitis or bacteriuria. Thanks to the property it possesses of dissolving uric acid concretions it may also be used in urinary lithiasis, according to Nicolaier. It is given in doses of from five to seven grains, three times a day, after meals, in a glass of water or soda water. The smaller dose may be continued for a long time. J. J. C.

The Emergency Hospital.—The Emergency Hospital, which was expected to fill a much-felt want in the case of down-town accidents and cases requiring immediate attention, seems to be developing into a sort of emporium for the free dispensing of sticking plaster. Instead of relieving the General Hospital, the new institution seems to do little but run away with its funds, in looking after trivial cases of cuts and bruises requiring merely the application of a little water and plaster. Every day some half dozen such cases present themselves for treatment at the Emergency Hospital, and the attendants are kept employed at petty matters, such as were not included in the category for the treatment of which the hospital was built. Whenever a down-town employee cuts his finger or sustains the slightest injury, or even an insignificant abrasion of the skin, he rushes off to the Emergency Hospital, and is supplied with bandages and water. Apparently the cases treated become more trivial daily. The Emergency Hospital was established to be used, not abused.—*Evening Star.*

Another Acquisition to our Staff.—We have pleasure in announcing to our readers that Dr. Alexander McPhedran, Professor of Medicine and Clinical Medicine at Toronto University, has joined us and will have charge of the department of Clinical Medicine. Dr. McPhedran is well known to the medical profession, as long since he has made his name a familiar one by his valuable contributions to various Canadian, as well as foreign, medical journals. Our readers can depend upon this department being contributed to in a very able manner.

Dr. John Punton, of Kansas City, has purchased *Langsdale's Lancet* and has changed its name to the *Kansas City Lancet.*

PERSONALS.

Dr. Goldie has opened up in practice at 56 College St.

Dr. W. W. Ogden was elected School Trustee in Ward No. 4.

Dr. J. Noble has again been elected School Trustee in Ward No. 2.

Dr. A. H. Garratt intends moving north soon, probably on to College St.

Dr. G. A. Peters has removed to his new residence, 102 College Street.

Dr. Herbert Adams made a splendid run in Ward No. 3 for School Trustee.

Dr. F. S. Spence was elected Alderman of Ward 2 at the recent municipal elections.

Dr. John Creasor has been laid up recently with the prevalent illness, but is better.

Dr. Jas. D. Thorburn will shortly be moving into a handsome new house, as also Dr. A. R. Gordon.

Dr. J. H. Lowe, on account of ill health, has left for England and will remain away some months.

Dr. W. B. Thistle has left 159 McCaul Street, and has taken the house on College Street recently occupied by Dr. G. A. Peters.

We beg to tender our sincere sympathy to Detective Wasson of the Ontario College of Physicians and Surgeons, in the loss last month of his estimable daughter, who for years had charge of the Ontario Medical Library, and always made herself most popular and ever courteous to members of the medical profession. In the loss of his daughter, Mr. Wasson can feel sure of deepest sympathy from every direction.

BIRTHS.

Hodgetts—On New Year's Day, 1899, at 189 College Street, the wife of Charles A. Hodgetts, M.D., of a son.

Pepler—On January 2nd, 1899, the wife of W. H. Pepler, M.D., of a son.

MARRIED.

At the Church of the Ascension, on January 3rd, the marriage was celebrated of Dr. Edmund St. George Baldwin, and Miss Louise Helen Montizambert, a sister of Dr. Montizambert. Miss Freda Montizambert was the bridesmaid. Dr. Montizambert gave the bride away. About a score of relatives and friends witnessed the tying of the nuptial knot by Rev. Arthur Baldwin, assisted by Rev. G. A. Kuhring.

The Physician's Library.

BOOK REVIEWS.

Rubáiyát of Doc Sifers. By James Whitcombe Riley. The *Century* Company. 1897.

This is one of the last of a very large number of little books of rhyme which this writer has produced with untiring enthusiasm during the past decade, and is not selected now for review so much because it in any way differs from other books by the same writer, as because it is supposed to be a character sketch of a member of the medical profession.

Medical men and medicine have of late been pre-empted more and more by the romancer and poet as a proper field for the workings of the imagination. The effect is not always a happy one. The solecisms of Hall Caine, and the Rev. Mr. Watson's propensity for bathos are cases in point. In the present little book the only reminder one is likely to receive of the Persian poet is that which arrests his attention for a moment in the title. It would seem that the author rather fancied using the word. The quaint uncouthness of Sicilian shepherds may have had a certain charm, even in the day of Theocritus. Certainly that school of poetry has never for long been allowed to fall into abeyance. And one recognizes in Mr. Riley's verse, not anything at all new, but simply another recrudescence of that frequently superannuated form of art. It is for him in this day to be the laureate of the "Gawk Americanus." Endless gaucheries are the eternal theme of his tireless song. An apostle of bread and butter, and of eating green peas with an iron knife, he may with much truth be regarded as the hobo's messiah—and they have hailed him with unction. But there are many pretenders who also make other little books almost as domestic and plebeian as Mr. Riley's.

In the present work a bucolic personage is supposed to be telling what he knew of Dr. Sifers, or "Doc," as that person chooses to call him. There is very little of medicine in the poem, but a great deal of everything else. The doctor was fond of fishing, it appears. He no less liked shooting. He was a wonderful detective also, and had five shelves full of large books. He was extremely religious, but, like many others in the profession, had not found it profitable to go in for any one sect and make enemies of all the rest; so he posed as a very liberal thinker, and his sympathies, like his practice embraced all the creeds of the community. He also liked circuses, and wept when he heard a brass band play. For that matter, he wept upon the slightest provocation. All Mr. Riley's men do. It is more effective than when women give way to the same emotion, though his women weep quite enough, heaven knows, to satisfy Heraclitus himself. The old doctor also liked going to fires, and was fond of other people's children, finding them full of a great wisdom, by reason of their being nearer to God, and therefore clearer reasoners than adults. He had, to sum up, been through the war. One closes the book with a sense of relief, and very reasonably, for a good many painful domestic scenes which, from experience, he has been prepared to find in every book of Mr. Riley's have been mercifully withheld in this one instance. Furthermore, there are not so many "blubbering," ill-bred men and women, spouting the tawdry platitudes of their class as might have been expected, and pediatrics has been only cursorily touched upon. As a poem characteristic of the medical profession the book is a failure. It is only characteristic of Mr. Riley; but he shines at his best when he tells of the fat grocer who is melted to tears for his neighbor's little boy (deceased some years since) as he measures out the sugar, or the hysterical baggage-man on the train, who between stations thinks of his old mother, and stops chewing tobacco with a low sob. He is especially good when exploiting

the amiable ways of dead or moribund juveniles, and, as Doc Sifers offers no very tempting selection for quotation, a few lines upon this alluring subject are substituted instead. They are not, it is true, from the pen of Mr. Riley himself, but they are in the same literary taste :

LITTLE HENRY.

" Little Henry, he can't come
Out and beat his little drum ;
And in school there is, I guess,
One little feller (Henry) less.
He haint dead though—I aint cryin',
Don't stare so, and stop your lyin'—
Only—boo hoo—why can't he
Come and play out doors with me ?

" Maw, she says to uncle Si,
'Yew daon't think that Henry'll die ?'
'Naw, fer Doctor S. K. Falls
Every other morning calls ;
And his sentient eyes grow moist
When he tells the neighbor boys t'
Not ter holler—he affirms
Little Henry's got the worms ! '

" Ole Doc. Bunker, allopath,
Grumps at Falls in senile wrath ;
But *I* know that *way up there !*
They hear Henry's uncle's prayer,
And quite soon, I don't misdoubt,
He again will be about—
Put it thar—naw ! Yes ? well, rather—
How'd I know yer Henry's father ? " E. H. S.

The Diseases of the Lungs. By Jas. Kingston Fowler, M.A., M.D., F.R.C.P., Physician to the Middlesex Hospital and to the Hospital for Consumptives and Diseases of the Chest, Brompton ; and Rickman John Godlee, M.S., F.R.C.S., Fellow and Professor of Clinical Surgery, University College, London ; Surgeon to University College Hospital and to the Hospital for Consumption and Diseases of the Chest, Brompton. With 160 illustrations. Longmans, Green & Co., 39 Paternoster Row, London ; New York and Bombay. 1898. Toronto : J. A Carveth & Co., Canadian agents.

With two such well-known men in the profession as J. K. Fowler and R. J. Godlee as authors of any work, it is not to be wondered at that such a book should meet with so favorable a reception. Dr. Fowler and Mr. Godlee stand very high as specialists in diseases of the chest, their opinion being considered as highly as that of any English diagnostician. This book includes what no other similar work does, viz., both the medical and surgical aspect of chest disease as given by men well able to pronounce an opinion, thus making a work, not necessarily a treatise, which must of necessity prove of the greatest value to the general practitioner. We are greatly pleased to find in this book an idea carried out (of which our editorial pages are examples, and of which we think we can say this journal has led the way in Canada, as far as medical journals are concerned), viz., that each chapter is initialled separately, the writer of it thus assuming entire responsibility for views expressed. A chapter giving the main points of the anatomy of the chest has been introduced, and very wisely so, thus enabling the reader, who may have become somewhat rusty in that subject, to brush up again without having to consult some, perhaps, old work on human anatomy which has occupied part of a shelf for a good many years back. Four chapters have been allotted to pneumonia, which has been treated

by Dr. Fowler in a masterly manner. Chapters XXVII. to XXXIII. deal with Pulmonary Tuberculosis, also written by Dr. Fowler. The chapters on Injuries of the Pleura, Surgical Treatment of Diseases of the Pleura, Dermoid Cysts and others are dealt with by Mr. Godlee.

The Sexual Instinct, its Uses and Dangers as Affecting Heredity and Morals. By James Foster Scott, M.D. E. B. Treat & Co., New York. 1899.

This work is exceedingly moral (not to say religious) in tone, and is designed for the general reader rather than the medical practitioner; entering, as it does, into a number of questions which deserve wider dissemination among the laity. The writer does not claim to bring forward any new facts upon the subjects, but only to present what is already known in an acceptable form, and in this aim he has been eminently successful. The chapters upon Prostitution, Gonorrhea, Syphilis and Perversion are not at all extreme in their statements, while what he has to say on Abortion ought to be clearly understood in all ranks of society. In the chapter upon the "Influences which incite to Sexual Immorality," however, the writer perhaps exceeds the mark a little, and may possibly strike many as Puritanical and prudish. From the earliest times the sexes have both used innumerable arts by which to attract one another, nor can the practice be condemned, for it is one of the fundamental instincts of race, and, as Darwin repeatedly points out, many of the distinguishing characteristics of many species among the lower genera are solely to serve this purpose. The song of the bird, its plumage, the scent and color of the flower, indeed the whole world of nature is permeated with this one idea. The object of true science, moreover, is to examine and observe, not to denounce—that is for the ecclesiastic! For this reason we would like to see the word "immorality" dropped in this connection, as it indicates a question of ethics which has no place in exact science. And far be it from us (simple-living and plain men) to admit that "*That contrivance which in Elizabethan times was called a 'bum-roll,' and more recently a 'bustle,'*" is in the remotest way an "influence which incites to immorality," for I have perceived certain indications of its return into favor; and between the costumier and the Fair let no medical man, however wrapt in the pursuit of science, rashly interfere. E. H. S.

The Cold Bath Treatment of Typhoid Fever. The experience of a consecutive series of 1,902 cases treated at the Brisbane Hospital by F. E. Hare, M.D., late Resident Medical Officer, Brisbane General Hospital, Queensland. With illustrations. London: Macmillan & Co., Limited. 1898. Canadian Agents, A. P. Watts & Co., 10 College Street, Toronto.

We are not aware of there being any other book devoted to this subject, and it is most interesting to peruse this small work by Dr. F. E. Hare, giving as he does, a most succinct account of his experience in the treatment of nearly two thousand consecutive cases of typhoid fever by the cold bath method. It cannot be said that this method is new, as it is a number of years since the hyperpyrexia of this disease was first proven to be within the control of the physician by resorting to such procedure. That in many instances life has been saved by the patient's temperature being rapidly reduced in this way is unquestionable, and we do not doubt that, and especially so in General Hospital practice, it will be considered correct treatment and resorted to more and more as time goes on. Whether it will soon come to be used in private practice is, to us, a question, as notwithstanding what the author of this book claims to the contrary, the adoption of the cold bath treatment in private cases is not only abhorred by the patients, but necessitates a great deal of extra attention on the part of the medical attendant and nurses, becoming almost a "greater burden than can be borne" in houses especially where the proper facilities are not afforded for its adoption. Dr. Hare has in his book described the routine treatment as applied to an ordinary case, then goes into the influence to be exerted by this practice upon the symptoms, course and duration of this disease, and lastly the contra-indications as well as the additional therapeutic procedures called for in special instances. The book is practical and convincing, and worthy of perusal by all practical therapeutists.

The Treatment of Diseases of the Skin by Means of Minor Surgery and Physical Agents. Lessons given at the Broca-Pascal Hospital, by Dr. L. Brocq, physician of the hospitals. Compiled by Dr. Dehu. One volume in 8vo, of 288 pages, with twenty illustrations, bound in limp covers. Price, 6 franks. Georges Carré et C. Naud, editeurs, 3, rue Racine, Paris.

Ever since their introduction into dermatological therapeutics, surgical methods have been adopted with a constantly increasing favor, and their applications are continually becoming more numerous. It is important, therefore, that every practitioner should know them, and be able to use them should the occasion present itself. A physician who lives in a large city and can attend at a hospital clinic of skin diseases, finds it an easy matter to learn from the instructions of a professor, and become familiar with the operative methods adopted. Another, not so fortunately situated, if desirous of performing some slight operations, is embarrassed and hindered by small, unforeseen difficulties.

For instance, on consulting, in a given case, his treatise on diseases of the skin, he finds scraping and scarification recommended, but this simple indication gives no real information of the means required in order to realize the treatment. How should the operation be done? What instruments should be employed? How are they to be used? Should anesthesia be used, and what method? What kind of dressing should be applied?

Dr. Brocq's recently published work answers all these questions. Besides, it contains a summary of the personal experience of the author in all that relates to the surgical treatment of diseases of the skin. Not only the technical procedures, but also the indications and the results of each method are explained with that precision and carefulness in details, which are characteristic of the teaching of the eminent professor of the Broca-Pascal Hospital.

A Text-Book of Obstetrics. By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania. With 653 illustrations. Philadelphia: W. B. Saunders, 925 Walnut Street, 1898. Toronto: J. A. Carveth & Co.

Though it cannot be claimed for this book that there are many features essentially new and which are not found in many other books on this subject, yet it is safe to say that the work of the author, who is eminently fitted to take his pen and give the younger generation of practitioners the result of his experience for between ten and fifteen years of active practice, has been done in a manner which, we feel sure, will prove of assistance as well as interest to its readers. The book has been subdivided into five different parts: Part I. treats of Pregnancy, under which heading the anatomy of the pelvis and female sexual organs, menstruation, the development of the embryo, the fœtal appendages, diseases of the fœtus, physiology of pregnancy and the pathology of the pregnant woman are dealt with, Part II. treats of the Physiology and Management of Labor and of the Puerperium; Part III., The Mechanism of Labor; Part IV., The Pathology of Labor; Part V., The Pathology of the Puerperium; Part VI., Obstetric Operations; Part VII., The New-born Infant. The book is well condensed, no part being allowed to occupy greater space than its importance will allow. There are a large number of excellent illustrations, most of them having been taken from original photographs. This is well shown, especially on page 263, where three of the clearest illustrations (a ruptured broad ligament pregnancy) we have ever seen will be found.

Black-Board Heading used in the Lectures on Surgery. By Robert F. Weir, M.D., Professor of Surgery in the College of Physicians and Surgeons of Columbia University. Edited by Drs. A. L. Wolbarst and G. A. Saxe. New York, 1898.

This little book will interest all the pupils of the master of surgery, of whose teaching it is an exponent. As a guide to the study of surgery it is both convenient and useful. The book contains a series of tables on general and regional surgery which Dr. Weir has been in the habit of placing on the blackboard before his class. The book is carefully edited and printed. The chapters

on antisepsis, tumors, genito-urinary diseases, and injuries of the brain, are especially complete. We note that no antiseptic action is credited to boric acid. Formaldehyde and the silver salts are given prominent places among the antiseptics. Iodoform ointment is said to be inert. For disinfecting the hands, Dr. Weir advocates the use of chlorine in nascent state by a mixture of washing soda and bleaching powder. Under refracture for vicious union, the term "dysmorphosteodiaclasis" is used, probably as a joke. The rules for trephining are very complete and well arranged. Under subhyoid bursitis we notice an original method of excision. The bursa is filled with melted paraffin and the latter allowed to get hard, then the paraffin is excised with the bursal sac.

L. F.

Archives of Neurology and Psychopathology. State Hospitals Press, Utica, N.Y. 1898.

After a slight delay the first two numbers of this publication, which was promised in the final number of the *State Hospitals Bulletin*, has just appeared, and exceeds in every way the utmost expectation of the many friends which, in its two years of publication, the *Bulletin* had won for itself. As an example of the printer's and binder's art, justice cannot be done to it by merely asserting that it is the most æsthetic medical publication we have ever had the pleasure to examine. Accustomed, as most medical men are, to the extreme plainness which characterizes the press work of many medical publications, the work in question, which almost surpasses the Johns Hopkins Press, may well be a matter of some pride to the profession, and of particular interest to the alienist, inasmuch as a great part of the work of the State Hospitals Press is done, we understand, in an institution.

The literary merit of the initial numbers is in every way up to the artistic charm, and contains a short paper on "Psychomotor Manifestations," and an exhaustive article upon the "Correlation of Sciences in the Investigation of Nervous and Mental Diseases." A most interesting table of contents is promised also for the forthcoming numbers; and it is not too much to say that the "Archives of Neurology" will enjoy a popularity commensurate with its sound value as a contribution to the permanent literature of psychiatry. The subscription price is only $3.00 a year. E. H. S.

Primer of Psychology and Mental Diseases. By C. B. Burr, M.D. The F. A. Davis Co., Philadelphia.

It would be hard to find a more satisfactory volume than the present one to place in the hands of those who are preparing themselves for the care of the insane in institutions. In the course of study of nurses in General Hospitals, also, some knowledge of this subject is certainly much to be desired, as many otherwise excellent nurses become panic-stricken and singularly inefficient when confronted with a simple case of mania or melancholia. Furthermore, many private persons would be much benefited with the outline herein contained; for all cases of mental derangement are not sufficiently severe to indicate removal to an institution, but are of the benign character observed in the cases of Buddha, Zoroaster and St. Francis of Assisi: yet, while they do not call for active restraint, they certainly require the most intelligent domestic treatment possible. Following a short chapter on Psychology, there is a clear epitome of the more familiar forms of mental aberration: the remainder of the volume being taken up with a number of useful hints as to the care of the patient, his peculiarities and his special needs. E. H. S.

Drs. Harvey and Davidson's Syllabus of Materia Medica, revised in accordance with the British Pharmacopœia, 1898. By William Martindale, F.L.S., F.C.S., Member of Council of Pharmaceutical Society and late Examiner; joint author of "The Extra Pharmacopœia." Tenth Edition. London: H. K. Lewis, 136 Gower Street, W.C. 1898.

In past years this small booklet of Mr. Martindale's has proved a blessing to many students who presented themselves as candidates for degrees in medicine

and surgery in the University of Aberdeen and elsewhere, its purpose having been "to define and limit the area as well of instruction as of examination in the Materia Medica," and thus abridge their labor to a remarkable degree. It is a most useful guide to study in this subject, and a great assistance in remembering the more important articles and preparations in "The Pharmacopœia," having been revised in accordance with the most recent edition of that book.

Illustrations of the Medical Faculty, McGill University. E. M. Renouf, Montreal.

This series of illustrations, published by permission of the Faculty, of the McGill buildings and the various lecture rooms, as well as portraits of the various professors, will, no doubt, be of interest to former students. J. M. M.

Our esteemed contemporary Dr. Probst, Secretary of the Ohio State Board of Health, and editor of the *Ohio Sanitary Bulletin*, was unable to issue the November number of his valuable publication owing to the fact that during the thirty days of the month he was absent from his office twenty-five days. His leave of absence was not of an enjoyable nature, inasmuch as his time was taken up in striving to put down an outbreak of small-pox. We are pleased to learn that the local health authorities in Ohio have the disease well under their control. J. J. C.

PAMPHLETS, REPRINTS, ETC., RECEIVED.

"Are Complete Castrates Capable of Procreation," by F. R. Sturgis, M.D., New York.

"Studies of the Healing of Wounds, with Special Reference to the Iodine Preparations," by Prof. N. Zuntz and E. R. W. Frank, M.D.

"The Radical Cure of Inguinal Hernia by Fowler's Method, with Report of Cases," by H. O. Walker, M.D., Detroit.

"Chronic Catarrh of the Stomach." Chas. D. Aaron, M.D.

"Stomachic Disturbances Caused by Hernia of the Linea Alba in the Epigastrium." Chas. D. Aaron, M.D.

"Intestinal Auto-Intoxication," Chas. D. Aaron, M.D.

"The Antitoxin Treatment of Diphtheria," H. K. Mulford Co., Philadelphia.

"Transillumination of the Stomach with Demonstration on the Person," Chas. D. Aaron, M.D.

The *Philadelphia Medical Journal* has taken another decidedly advanced step in deciding to shut down on all exchanges from the first of the current year. As one journal puts it, "this may save apparently and be a losing policy actually."

Dr. Jas. Moores Ball has retired from the editorship of *The Tri-State Medical Journal and Practitioner*, and has been succeeded in that capacity by Dr. Warren B. Outten, of St. Louis, Mo. The special Xmas number of this journal is a credit to any staff. We heartily endorse their sentiments in reference to their Christmas issue when they say, "Our Xmas number may strike some as non-medical; but we believe in living as time slides along, and we think the doctor is entitled to alittle fun—once a year."

A WONDERFULLY PROMPT REACTION TO A SINGLE DOSE OF ERGOT.

BY DR. STANLEY S. CORNELL, ATHENS, ONT.

A SHORT time ago I was called by my friend, Dr. Mallory, of Delta, Ont., in consultation upon a case of abortion at the third month, in a woman aged twenty-nine years. The doctor had dilated the neck of the womb so as to facilitate the passage of the ovum into the world: but almost coincidently with the completion of his operative work, the contractions of the womb ceased. As a result, no expulsion of any part of the oval structures occurred. At the time of my arrival, four hours after the completion of the doctor's operative work, the following conditions were noted: Pale attenuated patient, with rapid, feeble pulse and rather cold extremities and relaxed muscles: an atonic uterus distended with an ovum three months old; a dilated womb-neck, emitting a blood leak that might at any minute develop into a serious flooding.

Now, here is the interesting part of my narrative: Dr. Mallory wished me to remove the ovum, and this could be done only with the aid of the curette. The operative work in itself offered no difficulties, because the mouth of the womb was fully dilated and relaxed; but there was reason to fear that the dislodgement of the placenta at its fundal attachments would result in great blood-loss, and that this blood-loss might prove extremely dangerous, if not fatal, to the patient.

My hands had already been scrubbed with soap-suds, and it was only necessary that I should give them a two-minute soaking in perchloride of mercury solution. Let me repeat a description of the conditions: Extremely anemic patient; contractionless and dilated womb: presenting ovum at the third month: womb bleeding to a considerable extent.

At the instant of immersing my hands in the mercuric solution, I told Dr. Mallory it would be well to administer a prophylactic dose of ergot: that the therapeutic effect of the ergot would not be manifest for at least twenty minutes, and therefore would not interfere with the manipulations inside the womb. The dose (one teaspoonful) was given. At the end of two and a half or three minutes—certainly at the end of three minutes at the longest—I turned to the womb, and to my utter astonishment the cervix was nearly closed. My fingers quickly ran over the front, back and lateral walls of the womb, a procedure rendered easy by deep pressure over the lower belly with one hand, and deep insertion into the vagina with the other, and detected the most perfect longitudinal tonic contractions of the womb muscle. I should not call this rapidly increased tonicity by the term contractions: it was one regular, steady, firm, reassuring, never-to-relax-again condensation and shortening of the muscular fibres of the womb: it was like some great force previously pent up and philosophically held in readi-

ness, sent out with the predetermination to properly meet the extreme circumstances of a destructive movement set up by the enemy.

Without saying more of the particulars of the case, I must add that the issue was a fortunate one. I knew that the rapid uterine contraction in this case was developed by the teaspoonful of ergot; it was Dr. Mallory's ergot, manufactured by Parke, Davis & Co. The doctor told me it was "P., D. & Co.'s Normal Liquid Ergot," and that its action was uniformly powerful and prompt. Preparations of ergot used by me in the last twelve years have never given me results comparable with those obtained by that one dose here described. The effect in the case recited was marvellous.

This is the first tribute in particular terms I have paid any firm, and I should certainly not give it in this instance, did I not believe the truth of what I have said.

A GENEROUS CONTRIBUTION TO THE FUND OF THE JUBILEE WING OF THE WINNIPEG GENERAL HOSPITAL.

When the managers of the Winnipeg General Hospital undertook to raise $50,000 for the Jubilee addition to that institution they realized it was no easy task that they had set themselves to accomplish. The people of Manitoba already felt that they had been fairly well taxed for this institution and it was with considerable difficulty, therefore, that some $37,000 was raised towards the amount needed, and this seemed to be about the limit which Manitoba was capable of giving. It was with a great deal of satisfaction, therefore, that the information leaked out last spring that some philanthropic gentleman had contributed $13,000 to the hospital fund, a sufficient amount to make good the $50,000 promised for the Jubilee addition.

The generous contributor of this amount was as modest as he was philanthropic, and would not allow his name to appear in connection with the gift. It has, however (as such things are apt to do) leaked out that Mr. W. W. Ogilvie made the contribution, and a representative of the *Telegram* called upon Mr. F. W. Thompson, Mr. Ogilvie's manager, in Winnipeg, to obtain confirmation of the rumor.

"Yes," said Mr. Thompson, "the rumor is correct. Mr. Ogilvie has always felt a deep interest in the Winnipeg General Hospital and believes it to be one of the most deserving of Manitoba's institutions. He has shown his appreciation of it on a number of occasions by substantial contributions, and he seemed to take much pleasure on this occasion in making up the balance of the $50,000 necessary to complete the Jubilee addition. He did not design that his name should appear in connection with it, but it has somehow or other leaked out, and now seems to be generally known. I see no reason why any further attempt at concealment is advisable."

A short time ago, Mr. Ogilvie paid a visit to the hospital and was received there by a number of the directors. The special object of his visit was to see the new wing which is now nearing completion. It is generally admitted that had it not been for Mr. Ogilvie's splendid generosity the directors could never have undertaken the erection of so large or so fine a building as is now being put up.

THERAPEUTIC NOTE.

Dr. Gottschalk, of Frankfort, reports (*Brit. Med. Jour.*, No. 1828, p. 7) the results from the use of Stypticin in forty-seven cases of hemorrhage. It may be given hypodermically (in urgent cases), or per os in solution or gelatin pearls. Dr. Gottschalk finds that 0.05 gm. ($\frac{3}{4}$ grn.) may be taken five or six times a day without any untoward effects. It has a great advantage over hydrastinine and other uterine hemostatics, in that, as might have been expected from its source, it possesses a well-marked and potent sedative action that is both local and general, and hence specially indicates its use in dysmenorrheic affections. Stypticin promptly checks hemorrhage resulting from pure uterine subinvolution—that is, that due to muscular atony and not to retention of membranes, etc. In fungous endometritis it is a valuable adjuvant to the curette: and it is very useful when the patient objects to curetting, and particularly in those cases in which this treatment does not stop the hemorrhage. It is also useful in bleeding caused by fibroids or the climacteric. In purely congestive menorrhagia it is well combined with hydrastinine. In menorrhagia the drug is best given four or five days before the period, 0.025 to 0.05 gm. ($\frac{3}{8}$ to $\frac{3}{4}$ grn.) four or five times a day, and continued until bleeding ceases: this not only diminishes the hemorrhage, but also renders the use of much smaller doses sufficient.

In violent hemorrhage Stypticin should be given hypodermically, according to the following formula:

Stypticin	1 gm. (15 grn.)
Distilled water	10 gm. (150 min.)

Inject daily 2 cc. (30 min.) into the gluteal region.

Stypticin is powerless to control the bleeding of uterine polypi, and is contra-indicated in threatened abortion, or, indeed, in any of the hemorrhages of pregnancy, as it has a marked power of stimulating uterine contractions. This may be induced by it directly, or it may result indirectly from the anemia produced by its vaso-constrictor action.

In all of Dr. Gottschalk's experiments no other treatment than that of Stypticin was adopted.

Stypticin (chemically, Cotarnine Hydrochlorate) is obtained from the opium alkaloid narcotine by the action of oxidizers. Its formula is $C_{12}H_{13}NO_3H_2O.HCl$, and it occurs as yellow crystals or powder, readily soluble in water and in diluted alcohol.

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Original Contributions.

NO EVIDENCE IN AMERICA OF PRE-COLUMBIAN LEPROSY.*

BY ALBERT S. ASHMEAD, M.D., NEW YORK.

As a continuation of my answer† to the Berlin Anthropological Society's discussion on my paper, the question of "Pre-Columbian Leprosy in America," contributed to the Berlin Lepra Conference, I submit the following letter which I wrote to Dr. Dorsey, of the Field Columbian Museum, Chicago:

"I am going to ask you to do me the favor which you promised when I sent you my little pamphlets. Will you look over your Huacos pots and send me a photograph of such of them as represent disease deformation of faces and amputated feet? I contributed a paper to the Berlin Lepra Conference on Huacos pots, in which I claimed that they did not represent leprosy, but syphilis and lupus, or uta. Virchow, in discussing that paper, said that the question remained still in abeyance. He presented a figure from Dr. Von den Steinen, representing a beggar who, said Virchow, was a leper. Carrasquilla, of Colombia, thinks that the amputated feet of some of the images represent Inca punishment. Polakowsky and Von den Steinen reject the punishment theory, and stand by my opinion that there is no leprosy expressed. I shall be much obliged to you if you can help me in further research."

Here is Dr. Dorsey's reply:

"FIELD COLUMBIAN MUSEUM, CHICAGO, *June 11th, 1898.*

"DEAR DOCTOR ASHMEAD,—Your letter of April 20th was duly received, in which you make inquiry in regard to certain pathological conditions appearing on Peruvian pottery. I have been unable to take this matter up before, owing to certain extensive changes in our department of photography, but will have the matter attended to at once, and you may expect two or three interesting

* Written exclusively for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

† See "Transactions Berlin Anthropological Society, 1898."

photographs very soon. I remember that you wrote me when I was in Cambridge, inquiring as to whether I had any skeletons in which the phalanges presented a 'fused' condition. I am glad to be able to report to you that in an 'Ancon' mummy which I recently unwrapped, this condition prevails to a very marked degree: the similarity of the conditions and those of the photograph (bones of a leper's hand) which you then sent me, is very great. I am extremely interested in this entire subject, and will be very glad to help you in every way I can. Yours, very truly, GEO. A. DORSEY."

Here are two Peruvian photographs (Fig. 1) sent by Dr. Dorsey. They are unpublished, and represent Huacos pottery from Chimbote. The deformations are the same as those represented in some of my figures to the Berlin Conference: Soft part of the nose gone, septum showing that there has not been any falling in of the

Field Columbian Museum Collection. FIG. 1. HUACOS POTS FROM CHIMBOTE, PERU. *Dr. Dorsey's Photographs*

bridge of the nose, as occurs in leprosy; upper lip is retracted or eaten away, which does not happen in leprosy. In one of these images a tooth is lacking. There appears no tuberculation of the face. The most important part of these photographs is the hand of one of the figures, showing perfect fingers. If that type of leprosy had destroyed the nose, it would also have mutilated the hands. Even if the fingers had not gone so far as mutilation, they would at least have been *clawed*.

Regarding the Peruvian mummy, mentioned by Dr. Dorsey, I wrote him as follows:

"If you can give me X-ray photographs of the mummy whose hand bones and feet bones are very similar to my photograph of a leper's hand bones (published in my article, 'Pre-Columbian Leprosy,' *Jour. of Amer. Med. Assoc.*,

April, May and June, 1895), and also give me information as to whether the nose, fingers or toes are mutilated, I shall be extremely obliged. I have a paper in readiness for the Berlin Anthropological Society, and I should like before sending it to make my deductions on the question of leprosy in your Peruvian mummy. I wrote Dr. Kaurin, of Molde, Norway, for some photographs (X-rays) of hands and feet of living lepers. Of these I shall send you copies when I get them. With such photographs, compared with your Peruvian mummy, the conclusion will be decisive."

Here is my letter to Dr. Kaurin:

"Can you send me an X-ray picture of a leper's hand and foot for comparison with a Peruvian mummy just unwrapped in Chicago? This mummy's hand shows absorption of bones, as might occur in leprosy; at least, so says Dr. Dorsey, the Physical Anthropologist of the Field Columbian Museum. You know that I do not believe in pre-Columbian leprosy; therefore this unique finding is of extreme interest to me, for I never saw anything that suggested leprosy in the least in any pre-Columbian human remains."

Under date 16th July, 1898, Dr. Kaurin writes:

"I have sent your letter to my friend, Dr. Lie, at the Leper Asylum in Bergen. Perhaps he could send you an X-ray picture of a leper's hand and foot. As I have told you, the Leper Asylum, Reknas, in Molde, does no more exist; it is changed to a sanatorium for tuberculosis, and I have no lepers here now."

As yet I have received no X-ray pictures from Dr. Lie. Should I receive any I shall promptly transmit them to the Berlin Society.

As Dr. Dorsey was in Europe last summer, Mr. E. P. Allen, of the Field Columbian Museum, has kindly interested himself on my behalf in this mummy question. Here are three photographs which he sends me—a right foot, a right hand, and the face of the mummy (Figs. 2, 3 and 4). He says that at the end of ten days he will be able to send me the X-ray photographs which I want.

I may say here, that in all the Peruvian mummies which I have examined in various museums of America, I did not find one that showed the least evidence of leprosy. However, I have written to Mr. Allen the following letter, and I shall transmit the X-ray photos as soon as I receive them.

"New York, *October 3rd, 1898.*

"Dear Mr. Allen,—I have received the three photographs which you so kindly sent me. An examination of them shows not one sign of leprosy. If there was any doubt about this question in the hand and foot, the condition of the nasal bones, which are perfect, would settle the question. For the loss of nose in a leper shows a falling in of the nasal bones. There is no visible symptom of melting in the metatarsal, metacarpal bones, nor in any of the phalanges. However, to determine beyond cavil the question of leprous evidence in this mummy, which I presume is the one from Ancon, referred to by Dr. Dorsey, I should be extremely obliged to you if at the end of the ten days (necessary to get a satisfactory bulb for this work) you would send me those X-ray photographs of the mummy in question.

"With many thanks, very sincerely yours,

"Albert S. Ashmead."

I add here the translation of a work published in Dr. A. Petermann's "Mitteilungen," 1898, Part VIII., by Dr. H. Polakowsky, Berlin:

"*Was there a pre-Columbian Leprosy in America?* In the meeting of the Berlin Anthropological Society, of the 27th of April, 1895, Prof. Dr. Virchow

FIG. 2.

FIG. 3.

read a letter of Dr. Ashmead's, dated 26th of March, in which this gentleman informed him that he was a student of pre-Columbian leprosy in America, and called our attention to some earthen vessels which had been found along with mummies in old Peruvian graves. He declares that he could neither affirm nor admit that the mutilations of the human forms represented in them are necessarily or probably the work or the consequence of leprosy. He asks for the opinion of Mr. Virchow about them. Mr. Virchow declared hereupon that neither in the bones nor in the mummies of Peru, or of other parts of America, had he seen alterations which might have suggested the idea of leprosy. He said further that he had seen no proofs so far of pre-Columbian syphilis.

FIG. 4.

"In the meeting of the 18th of May, 1895, Prof. Bastian reverted to this question, and presented two of the Peruvian vases from the Berlin Museum. But Mr. Bastian does not express any opinion as to the meaning of these vases. On the other hand, Mr. Virchow remarked that these clay figures represented certainly pathological conditions; the head makes you think of leprosy, but it might also be syphilis. Mr. Virchow then speaks of the spreading of syphilis. He asks for more thorough searching in our collections, and assures us that so far the collections have furnished no proofs for leprosy or syphilis in pre-Columbian times.

"In the meeting of the Lepra Conference of 13th of October, 1897, Mr. Virchow presented a rather large number—about ten—of these Peruvian clay vessels, and referred in his speech to a rather voluminous manuscript on this

question sent by Dr. Ashmead. I think I may assume that Mr. Virchow referred to the manuscript which is printed in the first volume of the 'Mitteilungen der Lepra Konferenz,' and of which I shall speak presently. From the speech of Mr. Virchow I quote the following passages: 'The most interesting and also artistically most remarkable piece is a small kneeling figure which seems to represent a beggar, a leper—we may, at least for the present, assume that it was a leper—who addresses himself to the charity of the passers-by. He has a kind of drum with which he rattles, and has a very imploring and humble expression of face.' Mr. Virchow says further, if the question was only about the destruction of the nose, it might be lupus, and then continues: 'The thing would become a little more difficult through the feet, for that just these mutilations, which are undoubtedly spontaneous, should appear with perfect cicatrization, lies, at least in my experience, outside of the scope of known epidemic or endemic diseases, and I cannot deny that in the coincidence of these two conditions I see a strong argument that we have indeed to do with a representation of leprosy. So far, I differ from Dr. Ashmead, who in his memoir admits a certain mitigation.' Mr. Virchow further declares that the probability that we have here to do with syphilis is very small, and then says: 'I should, therefore, be disposed to interpret the matter thus, *that we have facts which speak for the pre-Columbian existence of leprosy.*'

"Dr. Ashmead had sent to the Conference a paper on the question of pre-Columbian leprosy; it was accompanied by three plates (photographs). One of the plates represented three skulls. Mr. Ashmead explains that the lesions were certainly not caused by leprosy. As to his remarks whether it is a case of syphilis, I cannot consider them in this place. The two other plates represent ten earthen vases, human figures, which are in part strikingly like those of the Berlin Ethnological Museum. Dr. Ashmead says that he has never found signs of leprosy on pre-Columbian bones. He says further that the clay figures with their deformed faces, while the fingers and toes never show any change, show very little resemblance to leprosy. He declares that the vases represented are undoubtedly of pre-Columbian origin. On what this affirmation is based he does not say, but names only the places where the vessels were found. The missing feet he always calls amputated. He says that the noses are, in several figures, eaten away, but that in no case this mutilation of the nose shows any likeness to the mutilations which leprosy produces on the nose. The lip also, says he, has been eaten away, and has not dwindled away through cicatrization, as would happen in a case of leprosy. He ends with the words: 'Tuberculosis, lupus alone could have done such work. If it was not one of these, then it was syphilis, *but it could never have been leprosy.* Two of our figures show strong prognathism, and apparently a diseased condition is meant. Could leprosy have produced that? Never!'"

Polakowsky continues: "The above is from the publications of Messrs. Ashmead* and Virchow, who have again stirred up the question of pre-Columbian leprosy (in America) in these last times. I cannot here speak and explain as to the clay figures in question. It would require the addition of a larger number of good plates. I advise the reader to read the debates of the Berlin Anthropological Society of the year 1897, where I have referred to the opin-

* See also, "Pre-Columbian Leprosy," by Albert S. Ashmead, in *Journal of American Medical Association*, Chicago, 1895. Under date June 7th, 1898, Mr. Ashmead writes to me: "My studies in Yucatan proved to me that there was no pre-Columbian leprosy among the Mayas. In this opinion I am fortified by letters from Teoberto Maler, of Ticul; Thompson (of the Royal Geographical Society), of Merida; from Brinton, of Philadelphia; and Prof. H. C. Mercer, of the American Archæological Department of the University of Pennsylvania. Professor Virchow has absolutely no leg to stand upon when he asserts that this question is open. I proved it to the satisfaction of the Smithsonian Institute, Washington, and had supposed the matter ended." Just now (25th July) a larger manuscript of Dr. Ashmead's has been handed to me, which I shall submit to the Berlin Anthropological Society, and which will be published there.

ion of some distinguished Americanists about these vases, and where I have more largely developed my own idea and explanation. I will only remark here that the old Peruvian earthen vessels of the Berlin Museum, which represent human heads and figures with mutilated or lost noses, upper lips and feet, certainly do not represent lepers. They are probably persons who suffered from a terrible form of lupus, endemic in Peru, and called 'uta,' or 'llaga.' This is the opinion of Dr. Marcus Jimenez de la Espada, whose letter was printed in the debates of the Berlin Anthropological Society, 1897. Moreover, it has not at all been proved, and it is not even probable, that the whole lot of the vases which Mr. Wilhelm von den Steinen has put together from the Berlin collections (Ethnological Museum) are (tumblers or votive images?) of pre-Columbian origin. If, then, these clay vases represented really lepers, which, according to a number of experienced leprologists whom I have consulted, and according to my own knowledge of leprosy, is most certainly not the case, even then they would not prove anything for the pre-Columbian existence of leprosy.

"We come now to the theme which is announced in our title. If we want to answer the question whether leprosy is of pre-Columbian origin, that is, whether it has already existed in America, at the beginning of the sixteenth century, at the time of the invasion of Spaniards and Portuguese in Central and South America, and before the introduction of the Africans, we find that an answer is possible through different sciences. We shall, therefore, divide the principal question into a number of subordinate questions:

"No. 1. What is taught by the history of the discoveries and conquests in America regarding the age of leprosy? I have occupied myself specially with a part of the discovery stories, and more carefully with the history of Southern Central America and Chili. I have thus examined a great number of the old documents which the Spanish Government publishes, or which were made known by special works. Nowhere, as far as I can remember, have I found any indication which could prove, or only make it likely, that the Spaniards have found this disease among the natives. The same experience has been made by many other Americanists, whom I have consulted recently, either orally or in writing. They all declare that they have never found such a passage. However, it is not altogether impossible that such indications may still be found. Especially in the records of proofs (probanzas), where a great number of persons express their opinions as to the acts of their leaders or companions, we find in the answer to the general question the most wonderful testimonies, exaggerations and untruths. I shall only mention the sensational book of the celebrated Spanish historian, Ces. Fernandez Duro, Colon y Pinzon, where on the foundations of such 'probanzas,' a quite false estimate of the merits of Columbus as to the discovery of America is given. I found in one of these 'probanzas' the affirmation that the con-

queror of Colombia, Gonzales Jimenez de Quesada, died in Colombia of leprosy, which he had contracted in his expeditions. This fact that Quesada died of leprosy has been mentioned by some as a proof that leprosy was at home in America before the arrival of the Spaniards. The truth is that Quesada had contracted this disease in Spain, a country which he repeatedly visited, and had brought it to America. Similar statements in documents of the time of the conquest, if there are any, ought to be submitted to careful examination.

"No. 2. What results from the study of the natives, whose purity has survived, as to the Indian origin of leprosy? These so-called wild and uncivilized Indians, who have not yet come into lasting contact with whites, mongrels or Africans, are all free from leprosy. I have, during the last twenty-five years, gone through the greater part of the most recent literature of the travels of discovery in Southern and Middle America, and never found any statement that the travellers, who were in a large proportion physicians, ever found leprosy. I mention only the most recent journeys of discovery in Brazil, the opening of Northeasterly Bolivia and Eastern Peru by the commerce of rubber and the search for communicating ways, the definitive submission of the Araucanians (1882), the activity of the missionaries in Bolivia and in the Chaco, and our quite recent knowledge of the Goajira Indians. Everywhere white men and hybrids, during the last twenty-five years, have become for the first time acquainted with new tribes of natives. We have a large number of reports on the customs, manners of living, etc., of these Indians, but leprosy is mentioned nowhere. The Goajira Indians are to this day perfectly free from leprosy, although both the neighboring countries are very leprous. I consider the facts indicated in this subordinate question as being of great value, as these researches may still continue, and as there are in Brazil and Colombia, up to this day, some tribes more or less unknown.

"No. 3. What is taught by the examination of old human bones? Mr. Ashmead, of New York, and Prof. Virchow, of Berlin, have repeatedly declared and written that they had examined thousands of skulls and bones of American origin, and most certainly pre-Columbian, and that they never could discover any trace of the ravages caused by leprosy. I do not know that similar examinations by other physicians have led to other results.

"No. 4. What answer is given by the study of American languages to the question of the age of leprosy? I cannot enter into this question, as I am not a linguist. I allow myself only the following general considerations: The languages of the aborigines of America, as far as they have been preserved or are known in these days, were and are comparatively poor. It is therefore highly probable that several skin diseases were designated by the same word. Also, a positive designation for leprosy may have originated only after the apparition of this disease among the people in question. Moreover, people do not agree yet as to the

real meaning of many words of the Quechua and Aymara language, which is the first to be considered here. For the reasons just mentioned, I do not believe that linguistics can furnish materials, valuable or even tolerably safe, to help us to answer our question.

"No. 5. What do we learn by the study of old monuments? In various parts of Spanish America, ruins with numerous stone figures, stone sculptures, and frescoes have been preserved which are certainly of pre-Columbian origin, and which represent more or less distinctly human figures. I shall mention especially the ruins and stone figures of Southern Mexico, of Guatemala and Nicaragua. Nowhere we find anything that might represent leprosy. As to the clay vases, which represent human heads or whole figures, it is very difficult to say whether a given piece is pre-Columbian or not. This is true especially of the so-called Peruvian vases, which up to the most recent times were fabricated after old potteries in order to sell them to the tourists. Also, it is impossible to say whether abnormal representations of the extremities are due to the awkwardness or negligence of the fabricant, or whether they refer to pathological conditions. This must be said especially of the old Peruvian vases, in which the artist concentrates all his knowledge and all his power on the representation of the head.

"Resuming what I have said so far, I think I can affirm that nothing or very little (eventually in the linguistic domain) speaks for the existence of leprosy in Central and South America before the beginning of the sixteenth century. On the contrary, what we know to-day justifies us in saying, 'There was no pre-Columbian leprosy in America.'"

I received the following letter from Mr. E. P. Allen, of the Field Columbian Museum, Chicago, about the X-ray photographs of Dr. Dorsey's mummy's hand and foot. The concluding sentence of the letter shows that I can depend upon receiving these photographs at an early day; they will then be published before this article is concluded.

"My Dear Dr. Ashmead,—I am afraid I will have to disappoint you at this late date in not being able to supply you with the X-ray photographs promised some days ago. I have had any amount of trouble getting a satisfactory tube; as yet have not been able to stand the necessary current. I am, however, in hopes of finding one that will work, when I will send the photos, too late for your purpose I am afraid. [I wanted them for the October, 1898, Berlin Anthropological Society meeting.] I am obliged to experiment just when I can spare the time, and that has been but a few minutes lately. *I am satisfied there is no sign of mutilation in this mummy* [Italics are mine], as I have had glances through the 'fluoroscope' in my attempts to photograph. However, I have nothing to say until you have passed upon it. I am indeed sorry I cannot keep my promise at this time. You may expect photographs as soon as practicable."

Here is a letter from Dr. H. Polakowsky, Berlin, published with his permission, and my reply to it:

"I must give you a short account of my adventures in the last meeting of the Anthropological Society. On the 22nd of this month (October, '98), I gave, in presenting your manuscript, a short supplement to the debates of the last three meetings of last year. What I said I do not want to repeat here, as my words will be printed, and as I allow to be printed only what I really said. It is not at all the same thing with Mr. Virchow, as is proved by the reports of the last three meetings of the year 1897. I will, therefore, write to you what Mr. Virchow said when I had finished my little speech, and I will say a few words of criticism about what he said.

"He declared first, in great excitement, that he was not the first who had exposed the vases in question. Now, it is certainly true that about three years ago three vases from our Museum were presented to the Society. These vases represented apparently sick persons, and came from old Peruvian graves. But for the Lepra Conference, Mr. Virchow had all the twelve Peruvian vases, which represent mutilated human heads and figures, sought out and presented to the Conference. These same vases he has, then, in two sittings brought before the Anthropological Society. Secondly, Mr. Virchow said that Mr. Ximenes de la Espada and Prof. Bandelier were not competent; that outsiders can only say what the figures do not mean, but not what disease they are meant to represent. To this I answered: 'When Mr. Virchow presented the objects to the Lepra Conference, and invited to a debate, I alone spoke. The same thing repeated itself here before the Anthropological Society, where again all the physicians were silent. Mr. Virchow did not say that only physicians are allowed to give their judgment. But now when I, as an outsider, make opposition to him, outsiders, and among them such eminent Americanists as Mr. Ximenes and Mr. Bandelier are not competent! But the question here is not about corpses or bones, but about clay vessels, and therefore I believe that Americanists, who like myself have occupied themselves somewhat with the study of leprosy, have a very good right to give their opinion.' To conclude: Mr. Virchow advised me to study lupus a little more carefully. I shall not follow this friendly advice. The indications about uta (lupus), of whose existence certainly not one member of the Society had had the least idea before, I have studied, and it seems to me, as to Messrs. Ximenes and Bandelier, yourself and Mr. Seler, that these two descriptions agree perfectly with the clay vessels in question. As it seems, the displeasure of Mr. Virchow has been caused by my speaking out these opinions of mine openly.

"H. Polakowsky."

Dr. Ashmead to Dr. Polakowsky:

"Your interesting letter of the 26th October has been duly read and digested. In consequence I have sent you by to-day's mail, in one package a copy of the *Journal of Cutaneous and Genito-Urinary Diseases* of February, 1896, containing Mr. Bandelier's letter to me. You will also receive in another package several other numbers of the same paper containing articles of mine. I think the most important of them is that which gives Hansen's opinion about the same vases. In one of the articles you will find these words of Hansen's: 'As to the photographs of Peruvian bottles, I can only say that the faces do not present any signs of leprosy; the noses seem to be somewhat damaged at the tip, but perhaps the old Peruvians were stump-nosed; there are no tubercles, and no phenomena of anesthesia.' If Virchow is not satisfied with the opinion of the most eminent leprologist, at least in the opinion of Berlin, what other opinion does he want? He says that I am not always to be relied upon; but should not the inventor of the bacillus be relied upon in a question of diagnosis of leprosy? This is also Dr. Leopold Glück's opinion, which he published in Lassar's Own Journal, July, 1898. I shall also send you on Saturday some copies of the *Journal of the American Medical Association* of 1892, '94 and '95. You will find something from me on pre-Columbian syphilis and leprosy. The Peruvian mummy of the Field Columbian Museum shows no evidence of leprosy, although Dr. Dorsey said that the hand and foot looked like the photograph of the bones of a leper's hand which I had sent him. I shall send you a copy of this publication, which will be the conclusion of my discussion with the

Berlin Anthropological Society, unless new material arrives from Colombia. Bandelier, although he is not a physician, is perfectly competent to judge in these matters; and this is the opinion of Prof. F. W. Putnam, of Peabody Museum, and the American Museum of Natural History. Pasteur was not a physician either. Yours respectfully, ALBERT S. ASHMEAD."

I merely add here that all the photographs of all my Huacos pots, that is, those of the Bandelier collection in the American Museum, were submitted by me to Dr. Hansen, and his opinion was given after he had looked at all of them. These same pots are published in the "Transactions of the Berlin Lepra Conference" In that Conference Dr. Virchow did me the honor to descend from the president's chair to discuss my paper, "The Question of Pre-Columbian Leprosy in America." He thought that one pot, especially, an identical copy of Dr. Von den Steinen's little image, which Virchow had exhibited there, represented certainly a leper. Dr. Polakowsky replied on the floor of the Conference to Dr. Virchow's refutation of my claim, which is, that it was lupus (uta), or syphilis, that was expressed thereon: that in all his studies in Spanish America there was no evidence of any kind, either written or traditional, that such a disease as leprosy ever existed in those countries. The matter then was laid before the Berlin Anthropological Society, and there the discussion still goes on.

Finally I have received from Dr. Dorsey the following letter regarding that Ancon mummy (will-o'-the-wisp), whose hand and foot bones he thought resembled a photograph of the hand-bones of a leper which Dr. Hansen sent me some years ago, and which is published in my article, "Pre-Columbian Leprosy," *Journal of the American Medical Association*, 1895:

"FIELD COLUMBIAN MUSEUM, CHICAGO, *November 18th, 1898.*

"DEAR DR. ASHMEAD,—I have just returned from my vacation and find your letters awaiting me. Am very sorry I did not save you the trouble by taking time before I went away to find the specimens you wanted. I have now spent two days nearly going over Ancon skeletons (over one hundred), but I am much disappointed. I have not found what I expected, what I am still convinced I have, and I told you I have. I now can no longer continue the search. Sometime I may find the specimen I had in mind when I wrote you. To-day I mail you two small bones which may interest you—Ancon, Peru. Kindly return them when you are through with them.

"Very truly yours, GEORGE A. DORSEY."

I do not believe, and will not believe, until Dr. Dorsey produces the specimen, that any Ancon mummy can show evidence of pre-Columbian leprosy. (The two small bones, in my opinion, are metatarsal bones of a club-footed individual.)

In corroboration of my position against Dr. Virchow, that is, that there is no evidence of pre-Columbian leprosy in America shown on Peruvian potteries, I give here the opinion of Hansen and Leopold Glück, both doctors, which Virchow believes to be a *sine qua non* to competency in these questions. Hansen is, as the whole world knows, the discoverer of the bacillus. Glück is admitted the ablest nasal and throat specialist in leprosy.

Hansen, regarding the photograph of Huacos potteries (which I published in an article, "Pre-Columbian Leprosy," *Journal of the American Medical Association*, 1895):

"I can only say that the faces do not present any signs of leprosy. The noses seem to be somewhat damaged at the tips, but perhaps the old Peruvians were stump-nosed. There are no tubercles, and no phenomena of anesthesia."

Glück (from Prof. Lassar's *Dermatologische Zeitschrift*, July, 1898), "On the Question of Evidences of Leprosy on Old Peruvian Pottery":

"Letter to the Editor,—You would oblige me very much if you would publish the following lines in the next number: Mr. Dr. Polakowsky was kind enough to send me a reprint of the Berlin Anthropological Society, what Virchow says about the morbid representations on old Peruvian pottery. In the last of the communications of the 18th December, 1897, Mr. Polakowsky refers to my humble person, saying: 'You will find three papers about the leprosy of the nose in the first volume of the communications of the leprosy conference. Among them there is also a great work of Dr. Glück, chief physician of the leper hospital in Sarejivo (Bosnia). This gentleman said to me, after the October sitting, that I had been quite correct in my judgment that these vases did not represent leprosy. He asks me to say at the next opportunity, referring to himself, that the nasal leprosy has another aspect, that the bridge of the nose sinks, that the openings of the nose are closed, that the wings of the nose swell considerably, giving the idea of an opera-glass; these are the *ipsissima verba* of Dr. Glück. Dr. Leloir, one of the first leper physicians, who died prematurely, uses the same designation. It is correct that after the meeting of the Berlin Anthropological Society, 16th October, 1897, at which I assisted, on the invitation of Dr. Virchow as a guest, I have declared to Mr. Polakowsky that these vases represent no leprosy. It is likewise true that I have spoken with the said gentleman about the deformations of the nose in lepers, but I cannot remember whether I have mentioned then only the opera-glass nose, or also the other deformations of this organ. At any rate, I want to declare here that I distinguish not one, but three types of nasal deformation in leprosy, as appears from my report published in the first volume of the communications to the Berlin Lepra Conference, "Leprosy of the Upper Respiratory and Digestive Tracts." But it was not the defect of nose and lips alone, which compelled me to believe that the vases did not represent leprosy. In considering these vases, I asked myself what form of leprosy we could have here? The faces of the figures show no vestige of leontiasis, the tips of the ears are rather thickened or elongated, the hands are not swollen, therefore we can exclude lepra tuberosa, especially as extensive mutilation of the inferior extremities never occurs in this form of leprosy. It could then only be lepra nervorum seu anesthetica. It is true I know neither by the literature nor by personal observation any case of lepra nervorum, in which the tip of the nose, part of the wings of the nose, and of the septum, as well as the upper lip have perished; yet this would not be impossible, especially if one considers that paralysis of many facial nerves with consequent inflammations and ulcerations of the skin are not particularly rare in this form of leprosy. The mutilations (?) of the legs, it is true, do not occur frequently, either in the form which is represented in our vases, but this is also possible in lepra anesthetica. But now the hands of the figures show absolutely nothing abnormal, which alone speaks already quite decidedly against the assumption of leprosy.' It may happen here and there, now and then, that the affections on the legs are more advanced than on the hands, but it is entirely improbable that the latter in such a late stage of disease as that represented on the figures, could remain entirely intact. The muscular atrophy and the contractures of the fingers are in all cases of lepra nervorum which have reached any considerable degree of development, manifestations so conspicuous and characteristic that the old Peruvian artists would certainly have been aware of them.

"Finally as to the legs, I see in them no mutilations, but amputation stumps, as those which remain after a regularly executed amputation of the leg. The stump has a smooth hemispherically-shaped extremity, deep horizontal or vertical furrows, which must be considered as retracted scars after flap-amputation on the legs.

"If we consider all these facts, one becomes convinced that the old Peruvian potteries which Mr. Virchow, on the 13th of October, 1897, has demonstrated in the third sitting of the Lepra Conference, and which afterwards have repeatedly been the object of debate in the Berlin Anthropological Society, certainly represent no leproses.

"It must be left to the investigator of the old Peruvian civilization to explain in a positive manner the meaning of the vases in question, that is, of the figures which adorn them. The leprologist can do that only in a negative manner by declaring that the affections which are apparent in them can certainly not be considered as leprosy."—*Letter of Mr. Counsellor of Sanitation and Chief Physician, Dr. Leopold Glück, in Sarejivo, to the Editor.*

As further corroborative proofs, I have studied and put on record the conditions of leprosy in Mexico, Nova Scotia, the United States, Peru and Bolivia, Brazil, Colombia, and Argentina, and in none of these countries did I find any historical evidences of leprosy.

In the *Berliner Klinische Wochenschrift*, No. 46 (-49), 1897, Virchow, in discussing a paper on leprosy in Brazil, by Dr. Havelburg, of Rio de Janeiro, in the German Medical Society of Berlin, disputes Dr. Havelburg's claim that the leprosy in Brazil was *post*-Columbian. Here are his remarks:

"Before I open the discussion, I should like on my side to observe in regard to the observation of Mr. Havelburg, that it is historically established that leprosy was brought into Brazil by people coming from Europe—that is, at least, how I understood it. That this is rather a well-meaning than a sure interpretation of historical facts, as far as I know there is nothing sure in that direction, and I will only emphasize, what I have done before, that just in the last times new researches in America—as well in North as in South America—have commenced in order to decide the question whether there has been a pre-Columbian leprosy. I have, at the occasion of the Jubilee Lewin, already called the attention of the public to this, that there are really all kinds of objects which may be interpreted in an affirmative sense. The most striking, according to my opinion, are certain earthen or clay figures which have been found in old Peruvian tombs, and which certainly show mutilations and changes of other sorts which might easily be referred to leprosy. These researches are not concluded, because we have not to do with real works of art which might be used as authentic interpretations. Anyhow, the things are very strange, and Mr. Ashmead, who at this moment is travelling about America in order to pursue the question still further, would probably have much to say against the theory that leprosy has surely been introduced into America. The reverse opinion is, according to my opinion, still discussable."

Dr. Havelburg answered:

"The much honored Mr. Chairman has criticised my historical indications that leprosy was imported into Brazil by the Portuguese. Any findings that leprosy existed in prehistorical times in Brazil are not existing so far. In a work based upon historical foundation, of Dr. Marcus Pareira, a jurist, and which I should like to bring to your library, there is an historical representation of the appearance of lepra in Brazil, and the development of the Hospital dos Lazaros, in Rio de Janeiro. The Portuguese are supposed in that work to be the importers of leprosy. In the year 1420, the Portuguese discovered the

island of Madeira; in the year 1498, under Cabrel, Brazil was discovered. Into the same period falls likewise the discovery of the Canary Islands by the Spaniards. According to the communications of different authors, and especially of two gentlemen in the 22nd Volume of the 'Archives for Pathological Anatomy,' as answers to an appeal made in the year 1861 by Mr. Secret Secretary Virchow in the case of lepra science, leprosy was most probably brought by Spaniards into the Canary Islands. In the fifteenth century leprosy was abundantly existing in Spain and Portugal. In 1542 the first leproserium was established in the Canary Islands by means of the men who, under the Portuguese flag, populated Madeira. In time, leprosy reached that island, so that in the year 1640, an especial lepra hospital had to be established there. But the greater part of the emigrants directed themselves to the greater colonial possession of Portugal, Brazil, so that the same was done there as in Madeira. I have received by good chance a small pamphlet of my colleague. Azevedo Lima. He has much to do with the leper hospitals of Portugal. He mentions it as a fact, that in the sixteenth century leprosy was carried into Brazil by Portuguese colonists. Two years ago I was asked by Prof. Ashmead, of whom Secret Secretary Virchow also makes mention, to give him some information about this matter, as he was occupied with a work on the spreading of leprosy through the Spaniards of the American continent. And on that occasion I found that the Brazilian authors were unanimous in this idea that the Portuguese carried leprosy into Brazil. Of course this is not a proof, and I am indebted to Secret Counsellor Virchow for the appeal which he made to me to search after the foundation of this historical idea so generally admitted in Brazil."

I received from Havelburg a copy of this discussion, and I sent Havelburg the following letter which he published in the *Wochenschrift*, Berlin, 1898:

"Dear Dr. Havelburg,—In the discussion in Berlin, on a certain paper of yours on leprosy in Brazil, Prof. Virchow disputes your claim that it is historically established that leprosy was brought into Brazil by people coming from Europe. He does not think this to be a sure interpretation. The earthen images, the Huacos of Peru, he says, show certainly mutilations and changes which could easily be referred to leprosy, and the question of pre-Columbian leprosy is still open. I think with you that the disease was imported by Spaniards and Portuguese, perhaps negroes—by the last not very probably; there is not a scintilla of evidence that leprosy was here before Columbus. I have sought over all America for some possible evidence of that kind, and have not found it. As to the deformations on the Huacos pottery, I have shown to the satisfaction of the Washington Smithsonians, and Prof. Brinton, the ablest American paleontologist, that these potteries show no evidence of leprosy; they are to be interpreted as syphilis and lupus, both of which diseases undoubtedly existed before Columbus on this continent. In the matter of syphilis, Virchow is the last to hold out against a pre-Columbian syphilis. He will not admit it. Prof. Brinton wrote me some time ago that I should endeavor to convert Virchow to my view, and I wrote to Prof. Putnam, of the American Museum of Natural History, to forward to that German scientist a Pachacamac skull, which was sent to the Museum by Prof. Bandelier, now at Lake Titicaca, Peru. This skull was dug out from a depth of twelve feet at Pachacama. There has never been found at Pachacama any *post*-Columbian bones buried at such a depth. Bandelier wrote me that this skull was without question pre-Columbian. It bears osseous evidences of pre-Columbian syphilis, so that we have two evidences in favor of the latter, the Huacos pottery and this skull. The bones of Colombia, the most ancient seat of leprosy in South America, have never been studied. Now Colombia is the country where this disease is most prevalent. It is my desire some day to go through this bone work for such evidence. I do not think I shall find it. As far as negative evidence can count for anything, leprosy did not exist in pre-Columbian days in the Micmacs of Nova Scotia, the Aztecs of Mexico, the Aymaras and Incas

of Peru, nor among the Indian tribes of Brazil, nor in Alaska and British Columbia. You are at liberty to send this letter to Prof. Virchow, or to any Berlin authority you please. A. S. ASHMEAD."

I also wrote to the editor of *Janus* as follows:

"I enclose to you some pictures of those Huacos potteries, some of which were published in the *Journal of the American Medical Association*, *Journal of Cutaneous Diseases*, and 'Transactions of the Berlin Lepra-Conference.' One of them, sent to me by Prof. Bastian, through Dr. Ed. Seler, of the American Department of the Royal Ethnological Museum, Berlin, represents a dwarf with evidences of lupus eating away the lip, and what I consider Peruvian Verrugas on the body. Mr. Jonathan Hutchinson, however, publishes this last in his *Archives of Surgery* for February, 1897, under the title, 'Molluscum Fibrosum.' I think he is wrong. By no means is this tuberculation to be considered leprosy, for the image is represented scratching; therefore no anesthesia. I have coming from Peru a consignment of some of these Huacos pots with deformations; these are picked from the largest collection in Peru (over a thousand) for possible evidence of leprosy. I shall be very glad to publish some of them in your journal when they arrive. I will only add that, as the matter stands now, *there is no such thing as pre-Columbian leprosy.*

"A. S. ASHMEAD."

Besides these researches I have hunted as far as I could through the Jesuit Archives in South America, and the Vatican Library, and the Archives of the Indies, in Seville, Spain. That my search has been a real one, and properly backed up by Catholic authorities, is shown by the following correspondence:

From the Apostolic Delegate in Washington:

"WASHINGTON, D.C., 201 I STREET, N. W., *July 26th, 1895.*

"*To Dr. Albert S. Ashmead, New York.*

"DEAR SIR,—Yours of 20th inst. received with pleasure. I comply with your request, and enclosed please find a letter of introduction for the Most Rd. Archbishop of Buenos Ayres, to whom I explain the purpose of your studies and researches. I take this occasion to thank you for the pamphlet you sent me, which proves to be very interesting.

"Yours respectfully, † FRANCIS, ARCHBISHOP SATOLLI,
"*Del. Apost.*"

Enclosure:

"WASHINGTON, D.C., *Dec. 28, Jul. 1895.*

"Apost. Del., U.S.A.

"Cum Albertus Ashmead, medicinæ doctor historica studia circa leprarum morbum in ista regione peragere cupierit literas introductionis apud A. Zuam a me petierit, ego licet personaliter eum non cognosco tamen quia jam graphalum cui titulo—*pre-Columbian Leprosy*—ediderit, eum A. Zuz commendo ut ea ratione quam opportuniorem censebit, subsidio esse velit ad faciliores ejus inquisitiones reddenda.

"Omni qua parest reverentia et benevolentia permanes.

"Excellentia V. Allmy et Remy.

"Addictusque in Xto. † FR., ARCHBISHOP SATOLLI,
"*Apost. Del.*"

Translation:

"As Dr. Albert Ashmead has begun studies about the leprosy disease in this land, he has asked of me letters of introduction to A. Zuam. Although I do not know him personally, yet, as he has published a pamphlet whose title is

'Pre-Columbian Leprosy,' I recommend said Dr. Ashmead to A. Zuz, in order that he, by what means he will think fit, may assist him and thus facilitate his researches.

"I remain, with all due reverence and love of your excellencies, most devoted in Jesus Christ. † FRANCIS, ARCHBISHOP SATOLLI,

"*Apostolic Delegate.*"

Here is a letter from Archbishop Corrigan to the American College in Rome:

"ARCHBISHOP'S HOME,

"452 MADISON AVE., NEW YORK, *January 30th, 1895.*

"*Rev. Dr. Farrelly, Rome, Italy (American College), Via dell Umilta 30.*

"REV. DEAR DR.,—Dr. Albert S. Ashmead, of this city, is interested in tracing the history of certain diseases, and he finds it important for the success of his labors to be able to consult the Vatican Library. As Monsignor Carini, so well known in connection with the Vatican Library, died suddenly last week, and as I do not know who his successor may be, I take the liberty of asking you to have the kindness to interest yourself in behalf of Dr. Ashmead, so that he may obtain, if possible, the information which he desires. I am sure the Holy Father will be gratified in having the Vatican Library contribute to the diffusion of scientific knowledge, as his object in throwing open its treasures to the world was precisely this, that truth might be better known and more fully appreciated.

"With thanks in advance for your kindness,

"I am, Rev. dear Doctor, very faithfully yours,

"M. A. CORRIGAN, *Abp.*"

And here is the reply of Reverend Farrelly:

"AMERICAN COLLEGE, ROME, *July 15th, 1895.*

"*Dr. Albert S. Ashmead.*

"MY DEAR SIR,— I had hoped to have given you long before this a satisfactory answer to your questions, regarding the disease of leprosy in Mexico, Colombia and Peru; but the investigations have not as yet thrown any light upon the subject. The Vatican Archives, I am assured by a friend who has made a very thorough examination of them, contain nothing whatever having any bearing upon the matter. As he is a most competent student, who has familiarized himself with these archives during the past ten years, I think his assertion may be taken as final.

"Probably something may come of a search which is being made among the archives of the Jesuit Fathers here.

"Professor Filippo Scalzi, a most noted medical archæologist, is much interested in your questions, and has several of his friends helping him to find documents relative thereto; but owing to the want of precise classification of correspondence in the archives here, there's no telling when they will succeed in finding anything.

"As the rector of the College has been in bad health for so long, and we have no vice-rector, I have been so busy of late that I hadn't the opportunity, during the hours in which the archives of the different libraries were accessible, to devote my personal attention to the search. Consequently I have had to rely entirely upon the kindness of friends. I can assure you that you may count upon their willingness and ability to find whatsoever is to be had.

"Meanwhile, please accept and convey to His Grace, the Archbishop, the expression of my regret at not being able to give you a more satisfactory answer at this late date.

"In thanking you cordially for your very interesting article,

"I am, my dear sir, sincerely yours in Xto,

† "JOHN P. FARRELLY.'

I have published also a letter from Dr. Francis G. Delgado, who has charge of the Archives of the Indies at Seville, Spain. His answer will be found in my article, "Leprosy in America before the Advent of Spaniards and Negroes," *Journal of the American Medical Association*, December 8th, 1894.

Mr. W. T. McGee, the ethnologist in charge of the Bureau of Ethnology, Smithsonian Institute, Washington, in reply to my inquiry, wrote me, July, 1895:

"Recurring to previous correspondence, I beg to say that, at your request, I had a search made in the United States National Museum for abnormalities in skulls and other bones from Central and South America, such as might be ascribed to leprosy; but I regret to say that no material of value was found."

Mr. Tweddle, of Talara Paita, Peru, whose mother owns the largest collection of Huacos pottery in the world, wrote me, October 15th, 1895, as follows:

"In answer to your inquiries I would say, that in looking over our collection of Huacos, there are several specimens which would probably interest you, as they represent figures which may be suffering from leprosy, syphilis, or a disease known in Peru by the name of 'Uti,' and which resembles tuberculosis. This disease, like Verrugas fever, is confined to certain districts of Peru.

"I have spoken to several medical men in Lima, and they have told me that what is called leprosy in Peru is not a true leprosy."

To conclude: Dr. Brinton, in his article on "Various Supposed Relations between the American and Asian Races," published in the "Memoirs of the International Congress of Anthropology in Chicago," learnedly refutes the theory of any communication between America and Asia. He says:

"Do any of the numerous languages and innumerable dialects of America present any affinities, judged by the standards of the best modern linguistic schools, which would bring them into genetic relationship with any of the dialects of Asia?

"I believe I have a right to speak with some authority on this subject, for the American languages have constituted the principal study of my life; and I say unhesitatingly that no such affinities have been shown; and I say this with an abundant acquaintance with such works as 'The Prehistoric Comparative Philology' of Dr. Hyde Clark; with the writings of the Rev. John Campbell, who has discovered the Hittite language in America before we have learned where it was in Asia; with the laborious 'Comparative Philology' of Mr. R. P. Greg; with the 'Amerikanisch-Asiatische Etymologien' of the ardent Americanist, Mr. Julius Platzmann; with the proof that the Nahuatl is an Aryan language, furnished by the late Director of the National Museum of Mexico, Senor Gumesindo Mendoza; with Varnhagen's array of evidence that the Tupi and Carib are Turanian dialects imported into Brazil from Siberia; with the Abbe Petitot's conviction that the Tinneh of Canada is a Semitic dialect; with Naxera's identification of the Otomi with the Chinese; and with many more such scientific vagaries which, in the auctioneer's phrase, are too tedious to mention. . . . I maintain, therefore, in conclusion, that up to the present time there has not been shown a single dialect, not an art nor an institution, not a myth or religious rite, not a domesticated plant or animal, not a tool, weapon, game or symbol, in use in America at the time of the discovery, which had been previously imported from Asia, or from any other continent of the Old World."

Now, I ask any reasonable man, how could there have been a

pre-Columbian leprosy without contamination from Asia? Let Dr. Virchow answer this. If all that I publish does not convince him of the error of his ways, then he must be utterly unteachable, and I should think that he might adopt the motto: *Sic volo, sic jubeo; stat pro ratione voluntas.*

ASYLUM OR HOSPITAL—WHICH?

BY ERNEST HALL, M.D., L.R.C.P. (EDIN.), VICTORIA, B.C.,
Fellow of British Gynecol. Society, etc.

HEREWITH are given the brief histories of two cases that have apparently been saved from the necessity of a residence in the Provincial Asylum. In each case had a local physician, without a thorough examination, recommended commitment, but after a pelvic examination the hospital was chosen instead of the asylum, with results more than satisfactory.

CASE 1. Mrs. O , aged 27, family history excellent, no insanity in relatives, one child six years ago, not pregnant since. After confinement gained strength very slowly, was practically an invalid for four months. During the last five years and a half she suffered with pains in the back and sides, but continued able to attend to domestic duties until she began to give signs of mental instability, said her husband tried to poison her, would run away from home and be found in the house of some acquaintance in a distant part of the city. The writer found her in the house of a friend, and with some little persuasion induced her to submit to examination, which showed retroversion apparently with adhesions. As the patient was not under anesthesia and sensitive, the condition of the appendages was not determined. Upon this finding I advised her being sent to the hospital. She again ran away, thus delaying the treatment a few days.

Operation.—Curettement, the uterus was not adherent. Abdominal section, right ovary cystic was removed with its tube, left tube thickened and was also removed, the ovary only partly diseased was resected and the remaining part was fitted cap-like over the ligament stump. Post-operative history normal, leaving hospital eighteen days after operation. Once after returning to her home she had a desire to get up and go out, but latterly has become herself again, and at the present time, two months after the operation, is physically sound, showing no indication of mental irregularity.

CASE 2. Mrs. S., aged 42, kindly referred by Dr. John Duncan, six children, three miscarriages, youngest child eight years old, no miscarriages since, no menstruation for four months. Had complained of pain in the head for eight months, became physically weak and very

anemic, with attacks of "epilepsy" (probably hysteria), three or four times a day, but for three weeks had been better. For two years patient had shown intermittent melancholia, latterly thought her husband was going to leave her, ran away from home and was found wandering aimlessly in the streets. She destroyed the house furniture, threatened to commit suicide, pawned her jewelry, had to be kept under restraint at home, broke out of the house and was taken in charge of by the police, etc. An examination showed bilateral cervical tear, retroversion, left ovary enlarged and hard, right ovary apparently in a mass of adhesions.

Operation.—Curettement, removed a mass resembling decidua but detected no ovum; as no microscopical examination was made it is impossible to state definitely its nature. The cervix was repaired, abdomen opened. The pelvic peritoneum showed small millet and cysts somewhat resembling tuberculosis. The right ovary was enlarged, the left enlarged and cystic, with varicocele of both broad ligaments. The appendages were removed; post-operative history normal, left hospital the twenty-second day, and to-day is managing her household, giving no indication of mental abnormality.

These cases require little comment, the facts speak for themselves. When will the prevalent and erroneous conception of insanity give place to one based upon scientific findings? Must the symptoms continue to be mistaken for actual disease, simply because pulse and temperature are wanting in febrile manifestations? Are we ready to admit that the delusions of the insane, or the delirium of pneumonia or typhoid are similar in their symptomatic classification? In theory we may affirm, but in practice a denial of such identity is manifested in the different treatment awarded to such cases. Each of these patients presented symptoms common to many who have spent the greater part of their adult lives in the insane wards, and it is not beyond the probable that had these cases been committed to the asylum they would have found their environment not calculated to eradicate the underlying disease, and barely possible a tendency to intensify their delusions. The necessity of making a thorough pelvic examination of these cases before suggesting asylum life, cannot be too strongly urged. This, if systematically followed would at least send two patients to the hospital for one sent to the asylum.

Why is it, let me ask our sceptical friends, that the proportion of insanity in the females, as given by the official reports, is two of the married to one of the single, while in the males the reverse is the case? Is it not probable, as stated by Hobbs, that the relation of wife and mother, with their attendant genital lesions, is at least one great factor in the production of insanity? If this be the case, then let us no longer be negligent in our duty to those who bear the burden of life's duties, and consider such symptoms as formerly were but finger-posts pointing to the asylum, as indications of the necessity for a closer examination and more skilful treatment.

Upon the whole, my work in this department, although not assuming great proportions, has been satisfactory. During the last fifteen months I have examined twenty-four women, all of whom, with the exception of one, were insane when seen, this one having been affected two months previously. Of these (24) I found pelvic disease in all but two, and one of these two, after her return from the asylum where she regained her reason, gave me a history of a year's illness following birth of one of her children and of subsequent hemorrhage and prolapse, also the removal of uterine polypus. Although no abnormality was discovered by pelvic examination, there is every reason to believe the probability of intra-pelvic trouble.

Fourteen cases have been subjected to operation, with the following results: Cured, five: improved, one: improving, two; too early to report, four; died, two. Of those cured, one had a history of mental disturbance covering the space of eight years, with two years and a half in the asylum, and one with a history of nearly three years of insanity. One not insane at time of operation is included, as there have been no manifestations of insanity since, now over six months, while the other two were recent cases. Of the two deaths, one resulted from tubercular meningitis seven weeks after the operation for the removal of enlarged and cystic ovaries, not connected in any way with the operation, as the wound had healed and the nurse discharged two weeks previously; the other followed infection of the pelvic veins, the probable result of a general infection which existed in the hospital at the time of the operation, which was the result of three other deaths at the hands of most careful surgeons and also infected several wounds.

A Proposed Bacteriological Laboratory for New Brunswick.

The *Maritime Medical News* for December states that a movement is on foot to bring about the establishment of a provincial bacteriological laboratory, under the care of a competent bacteriologist, for the Province of New Brunswick. The Provincial Board of Health has had the matter under consideration for some time, and has urged the local government to make provision for the salary of the bacteriologist in charge. It is proposed that every physician in the province shall command, *without charge*, the services of the bacteriologist for the early diagnosis of diphtheria and typhoid fever. Should the laboratory be established, it is expected that a small fee will be charged for sputum examinations and for tumor cuttings.

The *News* expresses the hope that the entire profession in New Brunswick will unite in support of the Provincial Board of Health in its effort to secure the establishment of such an important and necessary adjunct to the practice of medicine, and such a valuable means of preserving the public health.

Clinical Medicine.

...IN CHARGE OF...
ALEX. McPHEDRAN, M.D.

INFLUENZA: ITS PROGNOSIS AND TREATMENT.

In an able article on "Influenza: Its Prognosis and Treatment," appearing under the heading, "Cyclopedia of the Year's Literature," in *The Monthly Cyclopedia of Practical Medicine* for January, 1899, Dr. N. S. Davis says, in reference to treatment, "that to allay the pains and soreness and restore active elimination from the skin, kidneys and intestines are the rational indications to guide us in the choice of remedies. If called in the early stage of the disease, in all the milder cases he administers a single powder—containing from 15 to 18 grains of Dover's powder, 3 grains of calomel, and 3 grains of pulverized gum-camphor—given at bed-time. This is followed in the morning by a saline laxative sufficient to procure two or three intestinal evacuations This is usually followed by relief of all the more important symptoms; by giving 3 grains of quinine sulphate three times a day for three days the convalescence is completed. In the more severe cases, instead of one powder at bed-time, the same is given every four hours until four have been taken. The bowels are then acted upon by means of the laxative and followed with moderate doses of quinine alternated with 5-grain doses of sodium salicylate until all the active symptoms have disappeared. When the bronchial symptoms have been persistent, with soreness in the chest, instead of the sodium salicylate Dr. Davis has given with very good results, a teaspoonful of the following mixture every four or six hours until the chest-symptoms were relieved:

"℞ Ammoniæ hydrochloratis ..... 3½ drachms.
Ant. et potass. tart..... 2 grains.
Hydrarg. bichloridi ..... 2 grains.
Morph. sulph..... 3 grains.
Syr. glycyrrhizæ ..... 5 ounces.—M.

"When the influenza has involved at its beginning so much irritation of the gastric and intestinal mucous membrane that the doses of Dover's powder and camphor would not be retained, he gives instead 4½-grain doses of salol aided by 1½ or 3 grains of calomel at night for the first two days, with entirely satisfactory results. Then smaller doses of the salol, alternated with very moderate doses of quinine, has been all the medication necessary to complete the recovery of the patient. In all cases, during the active

stage the patient is kept at rest, and, as far as practicable, in a well-ventilated, warm, but not overheated room.

"When the temperature reaches 104° F., it is readily reduced by free sponging of the whole surface or a few doses of aconite or veratrum viride. The diet should be light and carefully adjusted to the ability of the digestive organs to receive and appropriate it. When pneumonia or any other complicating disease supervenes, Dr. Davis treats it on those principles that would govern its treatment under other circumstances. Cases of heart-failure may require the diligent and protracted use of strychnine, strophanthine, and other vasomotor tonics, with rest and fresh air.

"*Calomel.*—Freudenthal* claims to have discovered in calomel a true, absolute and unfailing specific for the treatment of influenza. The author has employed it during the last five years, and with invariable success. It must, however, be administered on the first or second day, but not later than the third day, as then its specific abortive treatment is lost. The calomel is given in doses of from 1 to 1½ grains for children, or in doses of $\frac{1}{6}$ grain for each year of the age. Two or three doses always suffice to produce the favorable effects. In a statistical table of thirty-two cases the average duration was three days. That the epidemic was not of a mild type, or that the cases are not selected ones, the severity of the initial symptoms, the temperature of 105°-106° F., the severe cough, hallucinations, etc., prove conclusively. In many cases the calomel was the only medication needed; in others, mild antipyretics and diaphoretics were added.

"The following combination is highly recommended by Baccelli† for influenza ushered in by severe fever and nervous disturbances:

"℞	Quin. salicylate	3 grains.
	Phenacetin	2 grains.
	Camphor	$\frac{1}{3}$ grain.—M.

"The above dose to be administered up to six times in twenty-four hours."

In our own experience, in the more common cases in which there is moderate fever, with pains widely distributed, we have found the following usually give satisfactory results:

Strontium salicylate	10 grains.
Para Acetphenetidin (Phenacetin)	5 grains.
Pulverized sugar	5 grains.

This quantity is directed to be given every two hours until the pains are relieved. If there are signs of prostration, caffeine, one or two grains, is added to stimulate the heart. Calomel followed by salines was given if there was derangement of the digestive organs.

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* *Therap. Monats.*, October, 1897.

† *Gazetta degli Ospadelie e delle Clin.*, No. 43, 1898.

Three classes of cases are met with that occasion anxiety. In one class, often with mild symptoms, marked cardiac weakness and severe prostration follow the attack. In these absolute rest is most essential. General and cardiac stimulating tonics do some good, but time, with good care, is the most important factor in securing restoration to health. In a second class there is marked irritation of the respiratory tract, often without signs of bronchitis beyond the harassing cough. For these sedatives are necessary, of which the following is useful and easily taken:

Codeine	gr. $\frac{1}{6}$ to $\frac{1}{4}$.
Acid citric	gr. 5.
Sp. chloroform	m. 5.
Vin ipecac	m. 3.
Elixir simplex	ʒj.

This quantity may be repeated frequently.

In the third class there is much gastro-enteric disturbance, occasioning diarrhea, with offensive stools. In these it is essential that the bowels be well acted on daily to remove offending material, and for this purpose calomel is probably the best remedy. Intestinal antiseptics are useful in restraining decomposition, among the most effective being bismuth naphtholate, resorcin, guaiacol carbonate, and bismuth salicylate. If the motions are too frequent, and especially if they follow immediately on taking food, a sedative should be given before food to lessen irritability, for which purpose the following is usually effective:

Codeine	gr. $\frac{1}{4}$.
Acid hydrocyanic dilute	min. 3 to 5.
Bismuth carbonate	gr. 15 to 30.
Mucilage of acacia	q. s.
Water to	ʒij.

A. McP.

Solution of Gelatin as a Hemostatic.

Garcia (*Gazette of Medica de Mexico*, May 1st, 1898), after exhaustive experiments to confirm those of Dastre and Floresco, thinks that a sterilized 5 per cent. to 10 per cent. solution of gelatin in water (or better still in a decinormal salt solution) is of the greatest value, and he has used it many times to stop an epistaxis that otherwise would require complete plugging before it yielded. He submits the following conclusions: 1. It is a hemostatic of the first order. 2. It coagulates blood from a wounded vessel, which coagulation is very rapidly organized. 3. It thereby facilitates primary union. 4. It is applicable in all hemorrhages where it can be brought directly into contact with the bleeding point. This holds true of epistaxis, cutaneous wounds and metrorrhagia.—*Annals of Otol., Rhinol. and Laryngol.*

Medical Jurisprudence and Toxicology.

IN CHARGE OF . . .
N. A. POWELL, M.D., AND
W. A. YOUNG, M.D.

PROGRESS OF MEDICO-LEGAL SURGERY.*

BY CLARK BELL, LL.D.,

Honorary Member International Association of Railway Surgeons; Honorary Member New York State Association of Railway Surgeons; President International Congress of Medical Jurisprudence.

In considering "Medico-Legal Surgery," I shall treat it under three separate heads: "Military Surgery," "Naval Surgery," and "Railway Surgery."

Recent events, which have unfortunately resulted in a war between the United States of America and Spain, into which the American Government has just entered, and is devoting its highest energies, will give additional interest to a study of the first two of three subdivisions, Military and Naval Surgery, which for the present purpose may be considered together.

Military Surgery.

In all countries the military surgeon forms a fixed and distinct arm of the service of the army of the nation; and its relation to medico-legal science has been well defined in the past in the service of the American Government.

The Army Medical Department, as organized in the American Government, constitutes one of the bureaus of the War Department, and is composed of one surgeon general, with the rank of brigadier general; six surgeons, with the rank of colonel, and styled assistant surgeon general: ten surgeons, with the rank of lieutenant-colonel, styled deputy surgeon general; fifty surgeons, with the rank of major, and one hundred and ten assistant surgeons. All assistant surgeons enter the corps by competitive examination, and are commissioned as first lieutenants; after five years, and upon passing successfully the required examination, they are promoted to the rank of captain. Promotion throughout the corps is by seniority. There are no regimental surgeons, but

* Read before Medico-Legal Society, June, 1898. Read before American Association of Physicians and Surgeons, at Chicago, June Session, 1898. From advance sheets of *Medico-Legal Journal*.

medical officers for posts, armies and commands are detailed for whatever duty may be required.

The Medical Department of the army also comprises the hospital corps, made up of hospital stewards, acting hospital stewards and privates, the number of each determined by the necessities of the service. The hospital corps is divided among the several posts where troops are stationed, and in force proportionate to the size of the post.

The army medical officer of whatever grade is a regularly commissioned staff officer, appointed by the President and confirmed by the Senate, holding his commission for life unless deprived of same by sentence of court-martial. The medical officer *cannot assume command* except in his own department, but by virtue of his commission he *may command all* enlisted men like other commissioned officers. Medical officers, by virtue of commission, are entitled to sit on courts-martial, boards of inquiry, or other boards or commissions, taking their places by seniority.

Each military department is entitled to a medical officer on the department staff, known as the chief surgeon of the department, and in times of war, or of active field duty, a chief surgeon of an army, army corps, or division, is detailed to duty with the general officer commanding such forces.

A more specific and detailed account of the duties, etc., of medical officers of the army is contained in the "Army Regulations, U.S.A." A "Circular of Information for Candidates Seeking Appointment in the Medical Corps of the United States Army" can be obtained on application to the Surgeon General's Department of the Army. (*Vide* also "Medical and Surgical History of the War of the Rebellion"; Buck's "Reference Handbook of the Medical Sciences," Vol. III., p. 105 *et seq*; *Ibid.* Vol. IX. Supplem. 640 *et seq.*; Piecher's "First Aid to the Wounded"; "Index Catalogue," Library of the Surgeon General's Office; Taylor's "Medical Jurisprudence," 12th American edition, Lea Bros. & Co., Philadelphia.)

In the several American States the National Guard has attached to it the regimental surgeon as the basis of its system.

The Association of Military Surgeons of the United States.

In the United States of America the military surgeons of the country have united in an organization—The Association of Military Surgeons of the United States—which embraces all branches of surgeons connected with the regular army and navy, as well as the military surgeons connected with the National Guard of the several States of the American Union. This body meets annually to consider questions connected with military surgery, and its contributions to the literature of this branch have been most important, and form a valuable contribution to the literature of military and naval surgery.

The National Guard of the States.

The medical service in the National Guard of the several States of the American Union is organized under the State Laws of the States upon a wholly different system. Each state has in its National Guard a Surgeon General, who is the highest officer in the medical service of the State. The basis of the practical service is a regimental surgeon to each regiment. Each regiment has its own surgeon, and in the great army now organizing to carry on the war with Spain, the call has been made by the President upon the Governors of the several States, who have thus far each furnished their quota from the National Guards of the several States, under the regimental system, and a surgeon goes out with each regiment of the volunteer force of the American Army.

In Great Britain, France, Germany, Italy, Spain and the Continental countries, the Army Regulations in each nation fix the status, powers, duties and responsibilities of the Army Surgeon.

Naval Surgery.

The medical jurisprudence of naval surgery does not materially differ from that of army surgery, but it is perhaps proper to speak of it by itself.

The Medical Corps of the American Navy is allowed by statute law a membership of 170. The corps is divided into five grades, to wit: Medical director, medical inspector, surgeon, passed assistant surgeon, and assistant surgeon, which have the relative rank respectively of captain, commander, lieutenant-commander, lieutenant and lieutenant junior grade, and ensign.

Admission to the corps is based entirely upon merit as determined by examination before a board of medical officers, carefully selected for this purpose. A copy of circular showing scope of examination can be obtained on application to the Surgeon-General of the United States Navy. When a candidate is successful before the Board, he is commissioned by the President, by and with the consent of the Senate, as an assistant surgeon, with the relative rank of ensign. After three years' trial in the service as an assistant surgeon, he is examined by the Medical Examining Board for promotion to the grade of passed assistant surgeon. In the event of failure he is again examined at the expiration of another year, and should there be a second failure he is dropped from the naval service. On promotion to passed assistant surgeon a new commission is issued by the President. Promotion from the grade of passed assistant surgeon and the other higher grades is by seniority, after examination before a board of medical officers.

The rank of the members of the Medical Corps, while conferred in the same manner as in the case of the members of the line corps, is relative, and in two grades, as shown above: there may be two ranks in the same grade, depending upon promotion in the line corps.

In Great Britain and in most foreign countries the naval surgeon occupies a similar position in relation to the service of his Government in the department of the navy; and the officers of both arms of the service usually unite in practical recognition in army and navy clubs, and in the united service of both branches of the service on land and water, which is also true of the Dominion of Canada and the colonial dependencies of the English crown.

Railway Surgery.

Railway surgery has become by far the most important branch of surgery in its relation to medical jurisprudence, when considered in its volume and as affecting the great body of the people, especially in the United States of America. The evolution of the railway system, especially upon the North American continent (which now has more miles of railway almost than all other countries combined) has in its train, and as a necessity, wrought radical changes, to both the legal and the medical professions, and has brought every inhabitant in the United States of America and the Dominion of Canada into the new and, at the same time, more immediate and direct communication and relation to and with the management of railways. The railway has revolutionized commerce, manufactures, mining, agricultural production and development, and indeed every branch of human industry. All manufactures, all products, are now brought to the market by the railway. It has superseded all other methods of travel or transportation where distance is a factor, and has become to the body politic—the State—what the arterial and venous circulation is to the human structure. In 1891 the Dominion of Canada had completed and in operation 14,000 miles of railways, while the United States had 214,000 miles, including double tracks and sidings. An enormous impetus and increase has since constantly occurred. (*Med.-Legal Jour.*, Vol. XI., p. 37.) Mr. Justice David J. Brewer, of the Supreme Court of the United States, in his address before the New York State Bar Association, stated that in 1893 there was $11,000,000,000 invested in railway property in the United States, whose shareholders in this country number less than 2,000,000 persons. (*Med.-Legal Jour*, Vol. X., p. 494.)

From an inexorable necessity, where the railways transport such vast numbers of the population, in all the varied pursuits and business of men, accidents have become a part and feature of the system; and the well-equipped railway of the present day must almost of necessity have its surgical system and its legal system. Chief Surgeon C. W. P. Brock, in his presidential address before the National Association of Railway Surgeons, in June, 1893, stated that "During the year ending June 30th, 1891, 7,029 persons were killed on railways in the United States, 40,910 injured. Of these 2,660 employees were killed and 293 passengers, and of the total injured 26,140 were employees." (*Med.-Legal Jour.*, Vol.

XI., p. 64.) There are a few railways who have perhaps not yet recognized this as indispensable, but only a few: and it may be stated as a truism, that every first-class railway must have its legal advisers, attorneys and counsel on the one hand, and its chief surgeon and surgical staff on the other. The railway that neglects to provide these two important adjuncts for its operation is not fully equipped for its work, and without proper surgical organization it would not only pay double what it should in accident and damage cases, but would not properly provide for the care of the wounded and sufferers from accidents of its own employees in its practical operation. The railway counsel has long been a conceded and recognized factor in railway administration; the railway surgeon is quite as necessary, almost as important, and his field of duty is an outgrowth of the railway system which is to a large extent a part of the growth and evolution of the railway itself. The railway surgeon has, in the United States of America, become a distinct and representative part of the medical profession, and he has come to stay as a fixed part of our railway system.

Section of Medico-Legal Surgery (of the Medico-Legal Society).

The growing importance of railway surgery in medical jurisprudence was distinctly recognized by the Medico-Legal Society, on September 6th, 1893, by the organization of a Section of Medico-Legal Surgery, embracing railway counsel and railway, military and naval surgeons, under a chairman and twenty vice-chairmen, selected ten from each profession from the various States of the American Union. This action was based upon recommendation made in an address, entitled "Railway Surgery in Law and Medicine," made before the National Association of Railway Surgeons, at Omaha, Nebraska, June 7th, 1893. (*Vide Med.-Legal Jour.*, Vol. I., p. 37, June, 1893: *Ibid.* Vol. XI., p. 203.) Chief Surgeon Granville P. Conn, M.D., of Concord, New Hampshire, was its first chairman, and was succeeded by Chief Surgeon J. B. Murphy, M.D., of Chicago, Ill. The chief merit and usefulness of this organization lay in its uniting in its labors railway lawyers of eminence and distinction, and the leading chief surgeons of the prominent American railways, so that both sides of all questions could be studied, as well from the legal as from the surgical and medical side.

The record of the labors of this body can be best considered and appreciated by its annual reports. The first annual report of the year 1894, showed the history of the organization, and gave its officers and a list of members, embracing twenty-eight of the leading chief surgeons of American railways, and a large number of local surgeons, military and naval surgeons and eminent railway counsel. It defined its province and domain by the following resolution:

"*Resolved*, That all questions in medico-legal surgery are

to be deemed within the province of the Section, including military, naval and railway surgery and the broad domain of surgery in its relation to medical jurisprudence." (*Vide* full report, *Med.-Legal Jour.*, Vol. XII., p. 471.)

"The following abstracts are made from its second annual report, January 2nd, 1896:

"The Section is intended to embrace, beside naval, military and railway surgeons and counsel, railway managers, railway superintendents and claim adjusters—railway officials, whether lawyers or surgeons, many of whom have already united with the body and who are eligible to membership under the statutes of the society. The officers of the Section are annually chosen. Three members of the Executive Committee constitute a quorum, and five of the board of officers of the Section.

"The work of the Section during the preceding year has been devoted to the advancement of the science of the medical jurisprudence of surgery in all of its branches. The papers contributed upon these branches of science have been in part published in the *Medico-Legal Journal*, which is the official organ of the Section, except those contributed to the Medico-Legal Congress, of September, 1895, which will appear in the Bulletin of that Congress."

Its annual reports January 1st, 1897, and January 1st, 1898, published in the *Medico-Legal Journal*, show the great field of its usefulness and utility. (*Vide* March Nos. *Medico-Legal Journal*, Vols. XIV. and XV.)

This Section now embraces about one hundred and twenty members, of which twenty-three are chief surgeons of railway systems; two surgeon-generals of States, and the remainder local surgeons, railway counsel and railway officials, of which a list is contained in March number *Medico-Legal Journal*, 1898, with a detailed statement of its section work.

The National Association of Railway Surgeons.

This is, so far as numbers go, the most powerful of the societies of railway surgeons. It was founded in June, 1888, and its first President was Surgeon J. W. Jackson, M.D., elected at Chicago, Ill. The idea of its founders was to open its doors to every railway surgeon in the United States and the Canadas, and it soon grew into a very large body. At the meeting held at Galveston, Texas, in May, 1894, the enrolled membership exceeded 1,700 names, and there were nearly one thousand persons in attendance at the session. Some there thought that the body was too large and unwieldy, and that that period was perhaps the maximum of its growth. It has not increased since then.

The scope of the work of this society is very broad, covering the entire field of railway surgery, and it aims to interest and associate every railway surgeon. It has held annual meetings in May of each year. It has made large contributions to the literature

of railway surgery, and has published a journal which was for all the earlier years under the editorship of Prof. R. Harvey Reed, then the treasurer of the organization.

Perhaps the most active and influential man of this body is and has been Wm. B. Outten, M.D., Chief Surgeon of the Missouri Pacific Railway system, of St. Louis, Mo. He was president for one term, and on the retirement of R. Harvey Reed, M.D., became editor of the journal, now called *The Railway Surgeon*, a position he still holds.

Its presidents have been as follows: Surg. J. W. Jackson. Surg J. B. Murdock, M.D., of Pittsburg, Pa, was elected May, 1889, at St. Louis, Mo. Chief Surg. Wm. B. Outten was elected May, 1890, at Kansas City. Dr. J. H. Murphy, of St. Paul, was elected May, 1891, at Buffalo. Chief Surg. C. W. P. Brock, of Richmond, Va., was elected May, 1892, at Old Point Comfort. Chief Surg. W. J. Galbraith, M.D., of the Union Pacific R. R. Co., was elected May, 1893, at Omaha, Neb. Chief Surg. Samuel S. Thorn, of Ohio, was elected May, 1894, at Galveston, Texas. Chief Surg. J. B. Murphy was elected May, 1895, at Chicago. Surg. F. J. Lutz, M.D., was elected May, 1896, at St. Louis. Dr. George Ross, of Richmond, Va., was elected May, 1897, at Chicago.

Present officers. These are as follows: President, George Ross, Richmond, Va.: Vice-Presidents, (1st) J. A. Hutchison, Montreal, Can.: (2nd) A. L. Fulton, Kansas City, Mo.; (3rd) De Saussure Ford, Augusta, Ga.: (4th) John J. Buchanan, Pittsburg, Pa.; (5th) H. L. Getz, Marshalltown, Ia.; (6th) R. R. Lawrence, Hartford, Mich.: (7th) W. Q. Marsh, Sierra Mojada, Coahuila, Mexico; Treasurer, E. R. Lewis, Kansas City, Mo.; Secretary, Louis J. Mitchell, 71 Laflin Street, Chicago, Ill.: Executive Committee, W. B. Outten, St. Louis, Mo.: J. B. Murphy, Chicago, Ill.; James H. Letcher, Henderson, Kentucky.

At its last meeting in May, 1897, this body changed its name to "The International Association of Railway Surgeons," and it selected Toronto, in the Dominion of Canada, as the next place of meeting in July, 1898.

The American Academy of Railway Surgeons.

This is an organization founded in 1894, composed of railway surgeons of eminence in the United States, and is an outgrowth of the National Association of Railway Surgeons. Its origin was due to differences of opinion existing among the original founders and prominent members of the elder society, both as to basis of organization of the National Association of Railway Surgeons, and its methods of work. Surgeon-General R. Harvey Reed, M.D., now of Rock Springs, Wyoming, was an important factor in the organization of the American Academy of Railway Surgeons, and one of the leading spirits. Since its organization he has been its editor.

This body has a membership (limited by its constitution to two hundred) of about 130 at the present time.

Its first president, elected in November, 1894, was Chief Surgeon C. K. Cole, of Helena, Montana, of the Montana Central Railway. Chief Surgeon John E. Owens, of the Chicago and Northwestern Railway Company, of Chicago, was its second president. L. E. Leman, M.D., of Denver, Colorado, was its third president, and Prof. R. Harvey Reed, M.D., now Surgeon-General, of Montana, is its president. It holds annual meetings.

Its present Board of Officers is: President, Dr. R. Harvey Reed, Rock Springs, Wyo.; First Vice-President, Dr. W. J. Mayo, Rochester, Minn.; Second Vice-President, Dr. A. D. Bevan, Chicago, Ill.; Secretary, Dr. D. C. Bryant, Omaha, Neb.; Treasurer, Dr. C. B. Kibler, Corry, Pa: Editor, F. J. Hodges, Andeson, Ind.; Ch. Executive Board, F. K. Ainsworth, Los Angeles, Cal.; Ch. Com. on Transportation, Dr. W. J. Galbraith, Omaha, Neb.; Ch. Com. Arrangements, Dr. Milton Jay, Chicago, Ill.

Its next annual meeting will be held October 5th, 6th, and 7th, 1898, at Chicago.

State and Other Associations of Railway Surgeons.

In many of the American States, state associations of railway surgeons have been organized, and several large trunk lines have organized associations of railway surgeons These bodies meet annually, choose officers and discuss papers and are composed, mainly of the local railway surgeons of the locality under the dominion of the Association. Their chief value and importance is in the educational improvement of the railway surgeons of the United States by conference with each other, interchange of thought and experience, and they have resulted in very valuable contributions to the literature of the science.

The papers contributed by the members of the various state and local societies of railway surgery in the United States during each year in the recent past would fill several large volumes, and the mere enumeration of their titles and authors would be too extended for such a contribution as this.

If the National, State and other organizations thus contributing papers to the literature of Medico-Legal Surgery would name an editorial revising Commission, with instructions to edit and publish all these papers for the benefit of both professions, the volumes would be of very great interest and value.

The following are among the more prominent of these State organizations as organized in the following States, namely, New York, Florida, Iowa, Indiana, Ohio, Texas and West Virginia.

Among the more prominent organizations of the large trunk lines may be named that of the Surgeons of the Big Four Railway System; Chicago and Northwestern Railway System; Wabash Railway System; The Pennsylvania Railway System; The Plant System; Santa Fé System; The St. Joseph System; The Southern Railway System, and the Northwestern Railway Surgeons' Association.

The Progress of Medico-Legal Surgery.

The methods of surgical practice since the last war in our country (1861), so far especially as it concerns military and naval surgery, have been marvellously changed.

In no branch of science has there been such stupendous changes and advances.

Surgery has become a more fixed and definite science in the past quarter of a century than in all the centuries before.

There has been a complete revolution in methods and in treatment by the military, naval and railway surgeon.

In 1861 a gun-shot penetrating wound of the abdomen severing the intestines was regarded as almost certain to be fatal. To-day the surgeon who lost such a case would be compelled to make an explanation or might be mulcted in damages in an action for malpractice if he did not do so satisfactorily.

The whole field of antiseptic surgery has been changed.

Electricity.

Electricity has come to be the hand-maiden of the surgeon, and sheds light upon the darkest and most impenetrable problems that surround his path. The Roentgen ray has no use anywhere at all comparable to its magnificent contributions to Medico-Legal Surgery.

The magic lantern, in the whole domain of electro-therapeutical surgery to-day, illumines the hand and the path of the surgeon, and the splendors of its achievements in abdominal surgery alone are resplendent and read like the tales of the lamp of Aladdin.

With a view of obtaining the views of the most eminent surgeons upon the evolution of modern Medico-Legal Surgery I addressed the following letter to Surgeon-General Nicholas Senn and Surgeon J. N. Hall, two of the most eminent American authorities, the one on military surgery and the other on gun-shot wounds, and its other eminent surgeons.

"Medico-Legal Journal," Office of the Secretary,
New York, May 16th, 1898.

Dear Colleague,—I am announced to write shortly on the Progress of Medico-Legal Surgery, and I wish to touch on the more important changes that have occurred in military surgery, since the period of our Civil War in 1861, more especially in gun-shot wounds of the abdomen and the whole field of antiseptic surgery.

Will you please name four or five of the most important advances in modern military surgery in this intervening period?

The war on which we are now entering will make such an inquiry all the more interesting now; and your large experience will be of value.

I shall, of course, credit you with anything you furnish me.

Believe me, dear sir,

Very faithfully yours,

Clark Bell.

Surgeon-General Senn replies as follows:

CAMP TANNER, ILL., May 20th, 1898.

MR. CLARK BELL, 39 BROADWAY, NEW YORK.

Dear Mr. Bell,—The most notable improvements in military surgery since the War of the Rebellion consist of protecting the wounded by strict antiseptic precautions. The wounds made by the small calibre bullet will present features which will require extensive observations to determine whether they are more mortal than those inflicted by the large bullet. One of the important features in the war which faces us, will be the prompt treatment by operative measures of abdominal wounds, which I am sure will be the means of saving many a valuable life. My future headquarters will be with the Sixth Army Corps, Camp Thomas, Chickamauga, Ga.

Very truly yours,
N. SENN,
Lieutenant-Colonel, U. S. V.

Surgeon J. N. Hall replied as follows:

DENVER, COL., May 20th, 1898.

HON. CLARK BELL, 39 BROADWAY, NEW YORK CITY.

Dear Sir,—The most important improvements in military surgery have been, I think, as follows:

The introduction of asepsis and antisepsis and consequent disappearance of the scourge of hospital gangrene, and, owing to healing by first intention, shortening of the time in hospital, and consequent increased efficiency of the surgical department.

Secondly, the wider application of resection of joints and saving of useful limbs in place of amputation. An improvement in this connection is the use of plaster-of-Paris and similar dressings.

Thirdly, the introduction of stitching or uniting by means of the Murphy button, or otherwise, of wounds of the intestines.

Fourthly, improved means for checking hemorrhage in parenchymatous organs; as, for example, the liver, kidneys and spleen, and in allowing a freer access to them because of the improved methods of operation and consequent improvement as to the mortality rolls after such wounds.

Yours very truly,
J. N. HALL.

Dr. J. Mount Bleyer is one of the most experienced of the junior American surgeons in electro-therapeutic surgery, and his experiments with the Roentgen ray are the best I have seen produced.

I addressed him a similar inquiry as to the advance in modern surgery by the use and application of electricity since the War of the Rebellion, of 1861.

His reply is as follows:

460 LEXINGTON AVENUE, NEW YORK, May 23rd, 1898.

CLARK BELL, ESQ.

My Dear Sir,—You ask me to give you the progress of the surgery of electro-therapeutics since the period of the War of the Rebellion.

I should state them briefly as follows:

1. The electro cautery, which renders many operations bloodless.

2. The destruction of tumors by electrolysis, which is a complete atrophy of the tumor, cutting off the blood supply completely and successfully.

3. Electric illuminations by which the bladder, stomach, throat, ear, nose and in fact all the cavities of the body can be successfully examined and explored.

4. The X-ray which still in its infancy is one of the most marvellous aids to surgery.

5. Electro diagnosis.

6. The treatment of certain forms of disease by various electrical contrivances, as electro-chemically disintegrating diseased tissues.

7. Electro-motor powers with most marvellous results.

8. The useful effects of high tension currents.

9. The accurate dosage of electricity by means of delicate apparatus.

Yours very truly,

J. Mount Bleyer.

Chief Surgeon Granville P. Conn, of Concord, N.H., was the first chairman of the Section on Medico-Legal Surgery of the Medico-Legal Society, and an authority of eminence and distinction. His reply to a similar letter as to the evolution of railway surgery during the same period was as follows:

Concord, N.H., May 30th, 1898.

Hon. Clark Bell, Editor *Medico-Legal Journal*,
39 Broadway, New York, N.Y.

Dear Sir,—Yours of May 26th is at hand, asking for the most notable advances in the department of surgery, especially in railway surgery.

In the first place, the department of railway surgery has actually been entirely evolved as a department of general surgery since the War of the Rebellion. Second, the introduction of antiseptics in surgery, and the possibility of performing aseptic operations, has entirely come to the front since the close of the War of the Rebellion. Since the introduction of antiseptics, and the possibility of aseptic surgery, operators have been enabled to perform, with perfect impunity, an operation that was not considered feasible prior to 1861.

The opening of cavities, the resection of bones and internal anatomosis become matters of almost every-day experience, and these were looked upon with especial disfavor in ante-bellum times. It is but natural to ask how much has been accomplished in so short a period. The answer is plain but significant, in the fact that it has all been brought about and made plain by hygiene, which takes cognizance of everything connected with medicine and surgery. It has pointed out that cleanliness and the destruction of disease germs, prior to operations, will insure almost perfect results, when proper hygienic measures have been introduced, and their principles thoroughly carried out.

Very truly yours,

G. P. Conn.

A "Home-made" Milk Sterilizer.

Dr. McClanahan states that a cheap and efficient sterilizer can be made in the following manner: Take an ordinary one-gallon tin bucket, twelve inches high, having a movable, close-fitting lid. Have a handle soldered to one side for convenience in handling. Have a false, perforated bottom, to which are attached three legs, each one inch long. This is to be slightly smaller in circumference than the bucket, so it will go inside and rest upon the bottom of the bucket. In the lid a small opening is to be made for the escape of steam. This sterilizer can be made by any tinsmith at a nominal cost.—*American Journal of Obstetrics and Diseases of Women and Children.*

Surgical Pathology.

IN CHARGE OF . . .
THOMAS H. MANLEY, M.D.

THE ROLE OF EPOCH IN THE EVOLUTION OF THE PATHOLOGICAL ANATOMY OF HERNIA.

BY THOMAS H. MANLEY, M.D., NEW YORK.

THE presence of a visceral protrusion through any of the apertures or inter-muscular planes of the abdomen always implies a faulty or defective development. This vice of conformation may appear at, or even before, birth, or in the senile stages of advancing age. Thus Forgue describes three types of hernia: 1, That of the new-born—*embryonic;* 2, that of early childhood—the *infantile;* and 3, that of matured development—the *adult.*

ARREST OR DEFECT OF DEVELOPMENT.

The infant at birth has but reached one stage of development, and many physical imperfections now obvious tend to obliteration or repair with the evolution and growth of the body. It is curious to note here, that after mid-life is past, reversion to the infantile, or fetal, type is most pronounced. The hair falls, the teeth are shed, the spine tends to straighten, the organs reduce in volume and energy.

The abdominal viscera, which in early fetal life are enclosed in the vitelline membrane exterior to muscular plates, in advancing years tend strongly to leave the abdomen once more.

The most palpable and tangible, as well as the most frequent, form of abdominal hernia we meet at birth, is *umbilical*, and the most common type of it now is the *embryonic.* It is scarcely proper to designate this a hernia at all, in many cases, because its contents were never *within* the abdominal cavity. The abdominal walls failed to completely close in over it. It is essentially a hernia into the funis, is invested by a thin, translucent and brittle envelope. Delanglade regards this type of eventration as dependent on two factors; arrest of development of the abdominal walls and defective union at the median line. Sometimes a pouch of this description may contain nearly all the abdominal organs. I recently operated on a case for Dr. L. Zwisohn, of New York—an infant two days old—in which the liver, pancreas, and all the alimentary canal, except the esophagus and rectum, were in the vast gauze-like sac. There was no abdominal cavity, or rather, nothing but a depression which scarcely admitted the tip of the index-finger. In Berger's late and exhaustive treatise, we find thirty-two

of this extreme type recorded, and Thudicum cites twenty-six which ended mortally after a precocious operation.

In *infantile* hernia, which appears at the navel during the first year, there is a dilatation and yielding of the umbilical scar, either marginal or central. This tends to spontaneous cure; but if we cautiously investigate the history of these unfortunate exomphoceles in the adult, said to follow "strain," notably, in females after labor, it will be found that they have had navel hernia in infancy. The *adult* type of exomphocele is marked by special and definite characteristics in its etiology and pathology. It tends to progressive increase in volume; the median line gives way, and coil after coil of the intestine passes out into their new abode, to become adherent, acquire union with the divesticulum and become irreducible. This hernia never undergoes retrogressive tendencies, but rather augments as age advances.

Inguinal Hernia.

Epochal influence in inguinal hernia is quite as obvious as in the umbilical variety.

In frequency, it takes the lead of *all* others as a congenital infirmity in the male, as *embryonic hernia*. Its presence at this epoch is explained by the anatomical vagaries attending the descent of the testes.

But, why do the testes descend in the male, and bring such misery in their trail? We can easily understand why the ovaries would be safer outside the pelvis. This question, like that inquiring into the need or use of the gall-bladder at the appendix, cannot be answered. The physiology of testicular descent is of great interest, though it certainly is not well understood.

Hernia or the hernoid state is a subject of great importance in pediatrics, because, in a large number of cases, hygiene and simple measures may accomplish as much or more than radical methods.

During the descent of the testes it may be arrested in any part of its passage, to later descend, any time from one month to ten years after birth. The fascia which lines the peritoneo-vaginal canal in the infant, tends to spontaneous and complete closure. In the horse, the lumen of the tunica-vaginalis and funicular process remains widely open. The fibrous cord, its remaining relic in the child, is known as Cloquets' ligament. According to John Hunter, obliteration begins at the internal ring. Féré claimed that closure was first obvious at the external ring, while, according to the later observations of Broca and Jarjavy, fusion is nearly always first noted in the centre.

It is curious to note that in inguinal hernia of the female infant, the ovaries or tubes are prone to escape: and also, that though inguinal hernia is comparatively infrequent in the adult female, in old women it is more common than in males at same age; in whom femoral is now rather more frequent than in the opposite sex.

Ophthalmology and Otology.

. . . IN CHARGE OF . . .

JAMES M. MacCALLUM, M.D.

NASAL CATARRH IN CHILDREN: ITS CAUSE AND TREATMENT.

At the November meeting of the New York Academy of Medicine, Dr. C. C. Rice, in a paper on the above subject, said: Many acute coryzas in children are simply symptomatic of pathological conditions in the nose or pharynx. In almost 80 per cent. of cases of chronic nasal discharge in children, the chief cause was some enlargement of the post-nasal or pharyngeal tonsil, which might or might not be accompanied by enlargement of the faucial tonsils. Only a very small amount of adenoid hypertrophy was necessary to produce chronic catarrh in young patients, because of the narrowness of the space. Purulent rhinitis in children was really an atrophic rhinitis from the beginning, and could be recognized by the condition of the nasal passages. All acute coryzas are most amenable to treatment, and the purulent discharge usually ceases when all nasal obstruction has been removed and the passages cleansed. Chronic hypertrophic rhinitis was comparatively rare in children. Many apparent hypertrophies are caused by interference with the nasal circulation, and disappear as soon as the real cause is removed. Naso-pharyngeal catarrh does not appear in children except as a symptom of the enlargement of the pharyngeal tonsil. Atrophic rhinitis was present in some degree in about 10 per cent. of children suffering from nasal disease over five or six years of age. Enlargement of the pharyngeal tonsil was the most common cause of nasal catarrh in children. This adenoid enlargement is common to all classes of children, and is often the result of the acute coryzas accompanying the eruptive fevers. In most cases, if the adenoids were removed by early operation, the hypertrophic changes in the nostrils would disappear and the nasal passages become normal. It was the imperative duty of the physician to remove enlarged pharyngeal tonsils.

Dr. A. Jacobi said that many infants suffer from nasal catarrh. Adenoids are rarely found in very young children, but nasal catarrh is common and severe. One reason for this was the small space in the nose. The lower passage hardly exists in the baby, and the middle passage is very narrow. The septum is more horizontal in the newly born, more vertical in the adult. Accumulations of mucus in that neighborhood are not expelled, and hence

give rise to irritation and nasal catarrh. The lymphatics in the baby are more numerous and larger than in the adult, hence any irritating material is absorbed very readily. One result of such absorption is enlargement of the lymph bodies about the neck. The adenoids are lymph-nodes, but contain much less connective tissue. Just as the cleansing of the nose would remove the enlargement of the lymph-nodes externally, unless too old and hyperplastic, so the adenoids, if they had not existed too long, would be removed. He wished to emphasize the fact that, in many cases, adenoids are not the cause, but the result of the nasal catarrh. The rhinitis was often the primary affection, and existed for years before the development of the adenoids. The latter are not common in children of two or three years of age, and common in children of eight or ten years. It was his rule to insist upon having babies' noses irrigated once daily with warm salt water, even in the entire absence of symptoms of nasal catarrh. The nose should be washed on the inside just as regularly as it is on the outside. Another reason for insisting upon this cleasing process was that the little ones are constantly putting their soiled fingers and all sorts of foreign bodies into the nostril. That is why all sorts of pathogenous and non-pathogenous microbes are found in the healthy as in the diseased nares. Dangers will arise from the presence of these microbes as soon as the mucous membrane is sore, the epithelium thrown off or injured, and absorption either of microbes or their toxins becomes possible. Here is the connection with all sorts of meningitis. It was very exceptional for children over ten years of age to have meningitis; on the other hand, the various forms of meningitis were most frequent between two and five years of age, or just at that period when the child was crawling around the floor and most apt to introduce all sorts of germs into the nasal passages.

Dr. Henry D. Chapin said that in children of four or five years, with more or less persistent nasal catarrh, he had found marked hypertrophy of the adenoid tissue almost without exception, and irrigation did not seem adequate to cure the condition. Sometimes a small amount of hypertrophy would cause great disturbance, so that these children would be constantly developing acute coryza. It was his practice to prescribe for these children irrigations with albolene, and if this were not sufficient, he scraped away the adenoid growth.—*The Laryngoscope.*

The British Medical Association.

At the next meeting of the British Medical Association, which will be held at Portsmouth, August 1 to 4, 1899, the address in Medicine will be given by Sir Richard Powell, and the address in Surgery by Prof. Alexander Ogston.

Public Health and Hygiene.

. . . IN CHARGE OF . . .

J. J. CASSIDY, M.D., AND E. H. ADAMS, M.D.

HYGIENE IN SHAVING AND HAIR-DRESSING PARLORS.

INSTRUCTIONS APPROVED BY THE BOARD OF HEALTH OF THE PROVINCE OF QUEBEC, AT ITS MEETING OF THE 17TH OF JUNE, 1898.

WHEREAS syphilis and other diseases of the skin and scalp may be propagated by the instruments and hands of barbers and hair-dressers, the Board, after having carefully examined into the various suggestions made to date to prevent such danger, and also into the discussion which has followed their publication, recommends the following measures:

I.—*To encourage customers* to have each his own instruments (razors, soaps, brushes, etc.), and to make it obligatory in the case of sick customers. It is also advisable, in the interest of the barber himself, to attend sick customers at their own homes.

II.—*Disinfection of razors, combs and clippers.*—

(As the processes of disinfection hereafter described may sometimes spoil tortoise-shell, celluloid, horn combs or razor handles, metallic combs and razor handles should be used in preference.)

Immersion, immediately after use, in an enamelled or galvanized-iron dish, containing either:

1. A solution of carbonate of potash (one per cent.) which does not spoil the edge of razors; or

2. Soapy water (soapy water preserves steel instruments from rust, provided, however, they be completely covered by the water).

Boil the solution of carbonate of potash, or the soapy water in which the instruments have been placed, for fifteen minutes, by putting a jet of gas or a coal oil lamp under the dish.

It must not be forgotten that by disjointing the scissors and clippers, their disinfection and cleansing is better affected. Scissors which are very easily taken to pieces are found on the market; and with regard to clippers, the preference should be given to models which can easily be taken apart.

Dipping instruments in alcohol, followed by ignition (instantaneous process) and the immersion in solutions of corrosive sublimate or carbolic acid, which processes have been recommended, are now abandoned as they are apt to spoil the instruments.

III.—*Disinfection of brushes.*—Deposit brushes on gratings in a small closet or case which closes hermetically and in which is kept a saucer constantly filled with a solution of formalin (one ounce for every cubic foot of the closet). The brushes are disinfected after two hours exposure to the fumes of formalin, but they may without inconvenience be left in the closet all the time they are not in use. They should be cleaned every evening with bran, clay, etc.

The way to obviate the necessity of disinfecting brushes is to dispense with their use. Even when the brush is perfectly disinfected, a great number of customers would prefer the hair-dresser not to use it at all, or at least that he should use it only after consent has been given by the customer.

IV.—*Purification of the shaving brush.*—The shaving brush can be also dispensed with, as instead one can use a ball of cotton wool, which is thrown away immediately after using. In any case, the shaving brush should never be used before the bristles have been immersed for a few minutes in boiling water.

V. *Purification of the hands.*—Before passing from one customer to another, the barber or hair-dresser must wash his hands, using soap and nail brush, carbolic soap to be preferred.

VI. *The powder puff* will be replaced by a ball of wadding, thrown away after being used; or, still better, by a powder-blower.

VII. *The alum stick* frequently used to stop the flow of blood, will be reduced to small pieces, so that each piece be used for one customer only. Calcined alum—a powder which can be applied on cotton wool, which should be thrown away immediately afterwards, is much preferred by most people.

VIII.—*Linen.*—Only strictly clean linen towels, wrappers (*peignoirs*), etc., will be used for each customer. If a freshly laundered wrapper cannot be supplied for each customer, discard it and use simply a clean towel. The customer will prefer having his own hair fall on his clothes than to have around his neck a wrapper which has only been shaken since the last customer had it on.

IX.—*Cleaning the head after cutting the hair.*—If the scalp is not washed, use only the comb to clean the head. The use of a stiff brush to clean the roots of the hair, followed by the use of a soft brush, or duster, on the scalp and face, is, to say the least, very disagreeable to most customers.

X.—Immediately after cutting the hair, sprinkle the floor with wet saw-dust and use a mechanical broom, the receptacle of which should be emptied into a covered bucket. The contents of the bucket should be burnt every evening.

XI.—*Razor strops.*—The only way to disinfect them would be to expose them to the fumes of formaldehyde (formalin); but as this is not a very convenient method, one must avoid contaminating them. To this end, they should only be used for razors which

have been previously disinfected, and, therefore, the barber should never stop shaving a customer to strop the razor he is actually using.

XII.—*The use in common of the same vaseline pot* should also be avoided. It is better not to use any vaseline unless the hair-dresser is prepared to use a spatula to take the vaseline out of the pot or bottle, being careful not to apply directly said spatula to his contaminated hands.

XIII.—Finally, *sponges* should never be seen in shaving or hair-dressing parlors. Although they may be disinfected in a solution of bichloride of mercury (a 1,000th solution), they will always be looked upon as suspicious and disagreeable by refined customers. J. J. C.

MUDDY SKIRTS.

Lady Haberton sees, in the attention at present being drawn to the spread of tubercular disease, an opportunity for again warning her sisters of the danger they incur in wearing long skirts. She is quoted in the *Times*, and as asserting that "she considers tuberculosis is greatly assisted by the ladies who drag their skirts through the filth of the streets." Her charge has stirred the soul of a *Westminster Gazette* poet, "R. C. R.," who produced the following lines:

Life is not a bed of roses,
When the vile tuberculosis
Has the upper hand.
But the *rational*isation
Of the ladies of our nation,
So I'm given to understand,
Will remove its awful terrors,
Due to skirts and *sweeping* errors
In the costume à la mode.
Yet I never had a notion
That the poetry of motion
Gathered microbes from the road.
And the cause of all distress is
Mud that dries upon the dresses,
Harboring a wealth of dirt—
At least Lady H. supposes
This to be the diagnosis
Of the fell tuberculosis.
Why not try the "Bloomer" process
And eschew the poisoned skirt?

—*The Sanitary Record, London.*

Proceedings of Societies.

PROVINCIAL BOARD OF HEALTH MEETING.

THE Provincial Board of Health assembled for its quarterly meeting at the office of the Secretary, Dr. Bryce, January 31st, 10.30 a.m., Dr. Macdonald, Hamilton, presiding. There were also present Drs. Kitchen, St. George; Vaux, Brockville; Cassidy, Toronto; and Bryce, Secretary. A large amount of correspondence was read and acted upon. The request of the School Trustees of Horton Township, Renfrew County, for an analysis of the water supply was concurred in.

The Medical Inspector of the district reported that the camps of the Victoria Harbor Lumber Company are now in good condition and free from disease.

The opinion of the Provincial Law Clerk was read, stating that the Act respecting contagious diseases empowers local Boards of Health to require physicians to report cases of tuberculosis to the Health Officer.

The Secretary reported upon the outbreak of smallpox in the Irish Creek district, and also that no new cases have been reported, but that he had that day received advices that four new cases had developed in St. Telesphore, Quebec, just across the river from Hawkesbury, in the same house from which a case had previously been reported.

The health authorities of Madoc raised an interesting question in connection with the recent outbreak of diphtheria among the employees at the Gilmore lumber camp. One of the men went home, carrying the infection with him, and the township was put to an expense of $225 in buying food, etc. for the sick people. The municipality wanted to know whether the lumber company could not be compelled to recoup the township for this expenditure. This proved a knotty question, and the Secretary was instructed to send a copy of the health regulations to the municipal authorities.

At the afternoon session the quarterly report on epidemics was adopted. From the report it is gathered that the past quarter has not been marked by any special prevalence of contagious disease in the Province, dealt with under the Public Health Act, although the remarkable climatic changes of the past month have been productive of an abnormal prevalence of diseases of the respiratory tract, and notably of influenza, showing in many instances a markedly infectious character. Such influences have similarly tended to an increase in diphtheria, of which the monthly reports show fifty-one deaths, or a rate rather above the average for the year.

Typhoid fever has shown a notable decrease in deaths, there having been in December only twenty-one deaths. Reports from Kaladar Township have come to hand telling of a notable prevalence of the disease for several months past in a rural district amongst poor settlers, and points to the obvious need of some means of systematic investigation and control superior to that possible in a township with a population of 360 ratepayers and an assessment of $73,000, with a tax of nineteen mills on the dollar. Such outbreaks illustrate the absolute necessity for a trained county officer, who could devote the necessary time to the control of such an outbreak.

Scarlatina shows a low incidence during the quarter.

Smallpox is, however, again present in the Province, while its prevalence in surrounding States, with its appearance in immigrants from a European port, and its presence in Quebec, Manitoba and British Columbia, all call for the prompt action of the local boards of the Province in preparing for its approach by at once taking steps for a general vaccination of our people, who have greatly neglected this precaution since the great Montreal epidemic in 1885.

A statement is given showing that during the past three months there have been eleven cases of smallpox reported in Ontario, of which eight have recovered, one died and two are still sick. The two cases which are still under treatment are at North Colchester and East Hawkesbury. The report continues:

"The scientific progress in the last few years in the preparation of aseptic glycerinated vaccine lymph has made great strides. The Local Government Board of England has instructed public vaccinators to use glycerinated calf lymph in preference to humanized lymph. Health authorities of New York, Chicago and other places are preparing and using it. Large private firms have it on the market, and it is advised that the proprietor of the Ontario Vaccine farm be requested to arrange for the preparation of lymph in a similar manner. The splendid results of such glycerinated preparations in successful vaccinations, and the absence of suppuration when the operation is carefully performed, encourage the hope that apprehensions on the part of any person as to the results of vaccination may be wholly removed.

"What the unvaccinated are exposed to is seen in the unfortunate case of the young man in Walford Township who died on Saturday last. The Medical Health Officer reports the receipt by deceased of a letter from a brother in British Columbia, and written apparently from a house wherein, as the letter states, 'his employer had just died of smallpox.' No other source of contagion seems possible, so far as reports go. Owing to delay of six days before the nature of the disease was discovered, others of the family are likely to take smallpox, neighbors exposed, and there is almost a certainty of more cases occurring. With prompt action by the local authorities, there is reason to hope the outbreak will be limited. There will, however, be a serious expense to the municipality

involved, yet if municipal authorities and private persons continue to neglect vaccination such expenses may be expected.

"Owing to cases reported in East Hawkesbury Township, in Prescott, contiguous to the Quebec County of Soulanges, where several cases exist, a medical inspector has been despatched to visit the districts where cases are reported and to take steps to have the local authorities active in the suppression of the outbreak. What further steps may be deemed necessary to be taken in view of the present situation will be for your Board to determine.

"The past year has been marked by remarkable activity in different countries as well as in the Province in the progress of the movement for suppressing the prevalence of tuberculosis. This has taken two directions—the one, the establishment of sanatoria for treatment and notification of cases; and the second has been the renewal of the crusade against milk and its products, which may carry the germs of tuberculosis."

The report pointed out how in Germany practical use was being made of the consumptive sanatoria by the workmen's insurance societies. A brief sketch of the societies was given, in which it was shown that in them, $7,300,000 was spent as the cost of medical attendance and medicine in a single year, and that $21,300,000 was the actual cost of sickness paid out in sick benefits by these associations. The associations having observed how in the first sanatoria early consumptive cases had been cured, seized the idea that if the disease can be cured it is better for their funds that they pay the cost of maintaining sick work people insured by them in these sanatoria than to pay death claims. So successful has the treatment proved, that, as the report states, over $1,000,000 was spent in 1898 alone for the construction of sanatoria and maintenance of patients in them by the insurance associations alone. The report of one of the largest of these on 1,541 patients treated shows that general improvement took place in 85 per cent., and complete restoration of working capacity in 71.8 per cent. The time which these companies are required to maintain a sick patient is a minimum of thirteen weeks. Their physicians thus are required to report consumptives at the earliest moment they are seen. The report urges that if such results are obtainable in Germany equally good results ought to be obtained for the thousands insured in our friendly and other insurance societies in Ontario, where, as the reports state, probably more than a third of all deaths in them are due to consumption.

Data were also given showing the presence in milk and butter of bacilli tuberculosis.

The report was adopted.

The Board resumed its session February 1st, 10.30 a.m., Dr Macdonald presiding. The report of the Health Officer of the Sudbury district stated that diphtheria had broken out on January 30th at Holland and Emory lumber camp, and that prompt action had been taken to suppress the disease.

Renewed complaints were received from Oakville in reference to the location of slaughter houses. Similar complaints from Uxbridge were also repeated. The authorities of Gloucester Township reported that arrangements had been made for general vaccination, and Dr. Macdonald, of Alexandria, Glengarry County, recommended general vaccination. A report from Irish Creek, Walford Township, stated that another member of the Brown family was probably down with smallpox.

The plans of the proposed sewer in Bentinck Township were approved of, subject to the provisos that the local Board of Health of Bentinck Township signify their consent to the Knechtel Furniture Company for the construction of the sewer; that the sewer be discharged into the Saugeen River direct by a tile sewer; that the Knechtel Company agree to assume any responsibility which may arise from the pollution of the Saugeen River, and that the local Board and the Knechtel Company agree to adopt such other method of sewage disposal as may be approved by the Provincial Board should necessity arise.

The Secretary was instructed to prepare a circular to local Boards of Health in the Province urging the need of providing for general vaccination of school children and other unvaccinated persons.

The Chairman, Dr. J. D. Macdonald, of Hamilton, presented his annual address, in which he referred with approval to the fact that the membership was unchanged owing to the advantage which arises from continuity of policy. In opening the year it is a pleasure, the Chairman said, to say that the health of the country has been good during the year which has passed. No epidemic has appeared, nor have infectious diseases obtained a footing in the land. Some of the latter kind have appeared, as appear they will, from time to time; but whenever such have occurred they have been promptly suppressed by measures directed by the active Secretary of the Board. Diseases of that nature may be seen tabulated in the monthly reports, but the cases have not been so numerous as to enable us to say that they have had any prevalence. Here too, however, exception should be made with respect to our old enemy, tuberculosis. It is always present, a persistent life destroyer, and during the year past has been true to its history. It has cost the country more lives than all the other diseases reported when added together. The Chairman, in discussing the causes and remedy of tuberculosis, referred to the action of the Board upon Dr. Cassidy's motion, which was that the Board declare phthisis to be a notifiable disease, and expressed regret that, while the necessity for carrying out of such decision is urgent, owing to public sentiment, it will need much time to reconcile the majority to the decision. The separation of the tubercular from the healthy by means of consumptive hospitals was approved.

The report of the Committee of Ventilation was presented by Dr. Cassidy. The report contained data of tests, which had been

applied and results obtained, respectively in (*a*) a system of heating and ventilation, invented by Mr. Shantz, school-teacher of Caledonia; (*b*) a ventilating and heating drum, used in connection with stoves, patented by Mr. Tracy, Toronto. Mention was also made of a system of heating and ventilating schools, described by Mr. Dearness, Inspector of Public Schools, London, Ont. The report was adopted.

At the afternoon session the Board discussed a number of amendments to the Health Act, relating to the appointment of county medical health officers. The matter was referred to the Committee on Legislation, to take charge of the matter and report the matter to the next quarterly meeting.

The legislation contemplated is an addition to subsection 44 of the Health Act, providing that within a certain period the present township health officers will be replaced by a single county officer for the area similar to that now under the supervision of the County School Inspector, that such medical health officer shall not engage in private practice, thus removing one of the chief objections to the present system, by which one rival practitioner is placed over his competitor in the capacity of Medical Health Officer. Such county officer shall be required to possess definite qualification by examination in medicine, and shall be prepared to examine chemically and bacteriologically water, milk, diseased tissues, etc., for the benefit of practitioners of his county. He will also be required to perform the duties now supposed to be performed by the Medical Health Officers nominally appointed in most cases by the Township Council. Provision is also made for fixity of tenure of office, and the officer would be charged with the duty of examining into the injurious effects of microbe organisms upon butter and cheese products. It is proposed that towns up to a certain limit may unite with the townships in the appointment of a county officer.

The Board then adjourned. J. J. C.

Thomas Dover, Physician and Buccaneer.

As Sir Thomas Brown remarks in "The Hydriotaphia": "The iniquity of oblivion blindly scattereth her poppy and deals with the memory of man without distinction to merit of perpetuity." Thus it happens that Thomas Dover the doctor has drifted into our modern life on a powder label (to which way of entering the company of posterity, though sanctified by Mithridates, many would prefer oblivion even to continuous immortality on a powder so potent and palatable as the Pulv. Ipecac. Co.); while Thomas Dover, president of the council of the *Duke* and *Duchess*—privateers of the ancient and honorable city of Bristol—discoverer of Alexander Selkirk (the original Robinson Crusoe), in spite of more enduring claims to our gratitude, has been forgotten.—*N. Y. Med. Record.*

The Canadian Journal of Medicine and Surgery

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Editorials.

THE X-RAYS IN DERMATOLOGY.

REFERENCE is occasionally made in the medical press to cases in which, after applications of the X-rays have been made to an individual for a long period of time, notable injuries have resulted. Proximity of a portion of the patient's body to the effluent tube of the electrical machine is also thought to have something to do with the bad result, and predisposition on the part of the individual may also have a certain influence. Alopecia, eczema, thickening of

the integuments and falling of the nails have been observed ; bullæ and sloughing of the integuments may appear, not only on the part of the body directly exposed to the electric current, but even in parts at a considerable distance from it. It has also been observed that in animals experimented with, such as the guinea-pig, previous to the appearance of alopecia, the skin becomes thickened, and presents other notable lesions.

At a recent meeting of the Society of Dermatology and Syphilography of Paris, these questions were pretty fully discussed. A patient was exhibited who had been employed in radiography, and had been exposed to the X-rays at short distances. On the right side of his body he presented a dermatitis of an eczematous form. Over the hand and forearm the skin was red, inflamed, thickened, almost indurated, and desquamating as in dermatitis. The nails, which had fallen, were growing again, but were much altered in appearance. The hair had fallen over a considerable extent of the surface of the right temporal region ; the right eyebrow and the moustache on the same side were a good deal thinned, and such hairs as remained were very much decolorized. He had been exposed to the influence of the X-rays, off and on during one year; the lesions mentioned above began to appear during the last seven or eight months. A strongly marked predisposition was, however, present in this case, because a companion of his, who was exposed to the same influences, exhibited similar injurious effects, but in a much less marked degree.

It appears that some enterprising dermatologists have taken advantage of the power of producing alopecia, which resides in radiography, and are using it in the treatment of hypertrichosis of the face. A number of cases treated in this fashion were exhibited at the Moscow Congress of Medicine. Recently a Parisian lady, who consulted a Viennese dermatologist for seborrheal acne, accompanied by hypertrichosis of the face, was treated on seventeen occasions by applications of the X-rays to the affected parts, the hairy scalp and the eyebrows being protected by thin plates of lead. The acne and seborrhea were considerably irritated, but in spite of this fact the Viennese dermatologist advised the lady to have two fresh applications of the X-rays made at intervals of fifteen days, promising her a certain cure. His advice was not accepted. This treatment seems all the more extraordinary since so accurate an observer as Barthélémy, of Paris, has noted that the hair grows as thickly and strongly as ever on parts denuded of hair by the

action of the X-rays. Certainly, to get such a meagre result it is not worth while exposing a patient to the possibility of some grave lesion of the skin, or even the nerve centres themselves. Barthélémy has seen guinea-pigs, in which an effort had been made to produce alopecia by the X-rays, afterwards attacked with paraplegia, without shedding a single hair. In the seven or eight cases of alopecia in man, produced by the X-rays, which had come under his observation, the hair had constantly grown again.

J. J. C.

TREATMENT OF ABORTION WITH RETENTION OF THE PLACENTA.

This important subject was very fully discussed in an illustrated article which appeared in *Le Progres Medical*, September 17th, 1898. The eminent Professor Budin, whose views were expressed in this article, is strongly opposed to the use of the curette, believing that, with skill and good management, all necessary manœuvres can be affected by the fingers of the accoucheur. According to him, when, after the expulsion of the fetus, the placenta remains behind in the womb, the following procedure may be safely adopted:

Chloroform is given, as the abdominal walls, the vagina and perineum should be in a state of complete relaxation. The operator takes the severest antiseptic precautions in regard to the genital parts of the patient and his own hands, and proceeds to obtain the dilatation of the cervix uteri, by first introducing the forefinger, and afterwards the forefinger and the third finger. Should the uterine tissue be too resistant, after lowering the womb with a vulsellum forceps, dilatation is effected with Hegar's bougies. When sufficient dilatation has been obtained, that is to say, when two fingers can be introduced, if it is a case of abortion at three or four months, or when a single finger enters the womb in an abortion at two or three months, digital cleansing of the womb is employed. One hand is placed on the abdomen, keeping the womb in place, and holding it solidly, while the finger, or fingers, introduced into the interior of the organ, detach the placenta slowly, regularly and completely.

Evacuation is the next stage. Sometimes the placenta may be drawn away by the two fingers, which seize it between them, or by

one finger curved like a hook and resting on the placental tissue or preferably on the resisting blood vessels, which penetrate the cotyledons. But if these attempts are unsuccessful, if the after-birth is too large, or the uterine orifice too small, the operator should not use a forceps. After breaking up the placenta he should practise *abdomino-vaginal expression*, which is effected in the following manner:

The fingers of one hand are introduced into the posterior vaginal cul-de-sac, which they depress, and are then applied to the wall of the womb; their palmar surfaces being directed upwards towards the symphisis pubis. The other hand placed over the hypogastrium, strongly depresses the walls of the abdomen, which, during anesthesia, are in a state of complete relaxation. Between the fingers, which are curved like hooks, and the palm of the hand, pressure is made on the fundus uteri, as well as the anterior surface of the organ. The womb, being thus grasped and compressed, the placenta, or the pieces of the placenta, and the membranes pass through the cervix uteri and drop into the palm of the hand in the vagina. The womb is afterwards explored to see that nothing remains behind. A douche of corrosive sublimate, 1-4000, is given through a uterine catheter. Swabs, dipped in the same solution, are introduced into the womb. They are moved about in the cavity of the organ from above downwards, and from below upwards, so that the anterior, posterior and both lateral walls are successively cleansed, and finally they are moved about in a rotary direction. When two or three swabs have been introduced and bring back no more *debris* of after-birth or membrane, two swabs are passed, which have been dipped in a solution of creasote and glycerine, 1-5, or equal parts, and the vagina is afterwards douched with a solution of the bichloride, to remove any excess of creasote, which is caustic in its action.

If there is no hemorrhage, and the uterus contracts well, the tampon need not be used. Under opposite conditions the womb and the vagina should be tamponed with iodoform gauze.

J. J. C.

ONTARIO MEDICAL LIBRARY.

At the annual meeting of the Library Association in June last, the President, Dr. J. E. Graham, made a strong plea for the establishment of a fund, the interest of which should be devoted exclusively

to the purchase of "new books." He felt that the tables were fairly well covered with the best journals, but that the shelves were wanting in the latest "book" publications.

The suggestion was taken up at the next meeting of the directors. As a result an Endowment Fund is now in actual existence, and we trust before long it will have swollen to such proportions that the interest will ensure the annual purchase of a goodly number of new books as they appear. The President was the first one to subscribe to this fund, and he promised $500, as per this memorandum:

We, the undersigned, promise to give to the Endowment Fund of the Ontario Medical Library Association the sums written opposite our names, on the following conditions:

1st. That the principal shall be safely invested, and the interest alone used for the purchase of the new books.

2nd. That the sum be paid in five equal annual instalments the first payment to be made in three months after date of subscription.

3rd. That in case of decease of a subscriber his heirs shall not be bound to continue the payment of the instalments.

4th. That the subscriber pay interest at the rate of 5 per cent. per annum on the unpaid instalments.

A number have subscribed to this fund in amounts ranging from $500 to $25. While $100 or $200 may seem a fairly good-sized subscription to the average practitioner, it must be remembered that this amount is spread over five years, and that the Library receives only the benefit of the interest. Will the readers of the Canadian Journal of Medicine and Surgery help to swell this "Fund" and thus increase the usefulness of the only professional library in the province—a library originated by the profession for the profession.

In a previous issue we noted with pleasure that Dr. Wm. Osler had volunteered to found a "Bovell Library" in connection with the Medical Library, to perpetuate the memory of his first teacher in medicine—the late James Bovell.

The following is a list of books purchased for the Bovell Library. It is the first of the five annual instalments bought with Dr. Osler's donation:

The most recent edition of "American Text-book of Therapeutics," "Diagnosis" (Vierordt), "Chemical Physiology and Pathology" (Haliburton), "American Text-book of Physiology,"

Vol. I. (Schafer), "Pathological Technique" (Mallory and Wright), "Clinical Methods" (Hutchinson and Rainy), "Clinical Diagnosis" (Simon), "Medical Diagnosis" (Musser), "Diseases of the Skin" (Hyde), "Tumors" (Sutton), "Diseases of the Stomach" (Hemmeter), "Diseases of the Stomach" (Sydney Martin), "Pyogenic Infective Diseases of the Brain and Spinal Cord" (Macewen), "Diseases of the Heart" (Broadbent), "Genito-Urinary Tuberculosis" (Senn), "The Tongue as an Indication of Disease" (Dickinson), "Clinical Examination of the Blood" (Cabot), "Gout and Rheumatism" (Garrod), "Nervous Diseases," two volumes (Gowers), "Heart and Aorta" (Balfour), "Heart and Aorta" (Gibson), "Anatomy," colored plates (Gray), "Tumors" (Senn), "Contributions to Clinical Medicine" (Anderson), "Diagnosis" (Hare), "Journal of Experimental Medicine."

It will be noticed that the works are on medicine, physiology, pathology and allied subjects, departments of medicine in which Dr. Bovell was particularly interested, and in deference to the wish of the donor, who has ever taken a most sincere and frequently a practical interest in the Ontario Library.

PHYSICIANS AND THEIR RELATION TO CHARITABLE INSTITUTIONS.

"Put some ginger in yer words
When you greet a neighbor."

THE neighbor we greet is the Hospital for Sick Children. Our greeting takes the two-fold form of congratulation and admonition: congratulation upon the generously accorded Christmas offering made to this worthy institution, a fitting tribute of thanks to the large-hearted and energetic man to whom especially the public owe a debt of gratitude as the founder and financial godfather of this Hospital; secondly, of admonition, because we, as medical men, feel we must appeal to this, and other institutions with similar charitable objects in view, by asking again that these hospitals close up altogether their public dispensaries, or at least make their rules doubly stringent, and the offence of obtaining free medical advice, under *pretence* of inability to pay for it, punishable by law. Again we reiterate, what we have already stated in previous issues of this journal, that these institutions are being

imposed upon by those who feign poverty. Only the other day our attention was called to the fact that a member of the staff of one of our public hospitals tendered his resignation to the Board owing to his being asked to attend as a "charity patient" one who had been, but a short time previously, a private patient of his, and who had paid him promptly and was still quite able to pay for professional attendance. We have heard that the erroneous idea has gone abroad that physicians upon the staff of hospitals are paid for their services by the "management" of these institutions, consequently the sooner the public are made to understand that the physicians are not paid for their ministrations in the public wards, the better for all concerned.

Let it be proclaimed by the united voice of the profession that the public wards and dispensaries are absolutely for paupers. Charity means much, but charity tempered by sound judgment and justice is what the physicians of the twentieth century are going to demand. W. A. Y.

STUTTERING.

In Denmark, public courses for treatment of stuttering have been held since 1895. Holiger Mygind, a medical member of the supervising committee, publishes an interesting report—abstracted in the *Annals of Otology*—from which may be obtained some valuable information on this neurosis, to the nature of which physicians are too indifferent.

In seeking for physical causes of stuttering, adenoid vegetations were found in nearly 40 per cent. of the cases. They bear only a predisposing relation, for their removal greatly aided subsequent treatment, or improved speech very much, but did not cure the stuttering.

For some reason males are more subject to stuttering than are females. Nature seems to hold an even scale, for while man monopolizes stuttering, woman has migraine pretty well to herself. When the child is learning to speak stuttering is very apt to occur —it is noteworthy that many stutterers are late in beginning to speak. Between seven and eight—the usual age to commence school—and puberty are other periods during which the infirmity is very apt to manifest itself, or, if present, to be aggravated. In each of these periods the peculiar nervous influences at work are evident.

Heredity plays an important part in the causation, whether direct inheritance from the parent or psychical contagion. Mygind regards stuttering as a neurosis related to the so-called neuropathies of degeneration, the stigmata of which may be "nervousness," megrim, asthma, epilepsy, neurasthenia, hysteria or stuttering.

J. M.

EXULTATION AND—REFLECTION!

While our glum doctors, wrought to anger solemn,
Write magazine epistles by the column,
We, too, may lay claim, like our English betters,
If not to genius, yet to "Men of Letters."

True, no one reads the grievances they tell us,
Knowing *a priori* that the pair are jealous;
For talk is cheap, and has its cause, says Rumor,
In too much leisure and too little humor.

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GERMS AND TELEPHONES.

President Murphy of the New York Board of Health recently sent out a staff of inspectors to examine public telephones, to determine whether they also are centres for the dissemination of disease germs. Dr. Murphy believes they are, and has determined that, if the inspection indicates the presence of germs, measures will be taken to render the instruments aseptic. We understand that in some of the large cities of the United States, if not as yet in Canada, complaints are being made in regard to the dirty condition of public telephones, and it can be quite easily understood how disease germs find lodgement in the receivers and transmitters. It could be quite easily discovered as to whether such were actually the case or not by swabbing the transmitters with cotton wool moistened in sterilized water, from which cultures could be made in potato starch. If telephones were sterilized once a year, they could be rendered innocuous and safe for public use. Dr. Murphy has determined that if his inspectors find that germs do exist on public telephones, he will cause the telephone companies to wash the apparatus every day with boracic acid or some other

disinfectant, and see that the rule is strictly enforced. Some may think that this is a little too loud a cry in favor of asepticism, but it remains a fact that in large centres where telephones are being used by different persons every hour of the day, accumulation of dirt is bound to be the result in and around the instrument, and there is no reason why a system of cleansing should not be adopted, and thereby decrease any risk of contagion.

W. A. Y.

EDITORIAL NOTES.

Our Staff Again Added to.—We have again the satisfaction of informing our readers that our staff has been still further strengthened by the addition of Dr. Newton Albert Powell, of Toronto, who will appear under the department of Medical Jurisprudence and Toxicology. Dr. Powell has for years been a keen student of medical law, and a lecturer on this subject in one of our medical colleges, being also a coroner for the County of York. Were we to say more in this connection than make a simple announcement of the fact it might appear fulsome. Added to his ability as a physician, Dr. Powell possesses the personal charm that accompanies a big bump of natural humor. He never misses the place where the sublime ends and the ridiculous begins. We extend to him a cordial welcome. W. A. Y.

Violations of the Ontario Medical Act.—Madame Clair, 227 Major Street; Miss Alice Whatmough, 613 Church Street; Miss Mary J. Seabrooke, Yonge Street Arcade; Miss Maria Fleming, of the Gunagathon Company, Temple Building; Miss Cooper, manager of the Canadian Viavi Company, Confederation Life Building, and Dr. Ellen Burt Sheratt, 179 Jameson Avenue, were arraigned last month in the Police Court on a charge of breaking the Medical Health Act. They all pleaded not guilty, and were remanded. All the women except Mrs. Sheratt have been running medical concerns for the treatment of women, and Detective Wasson, who laid the information, says that this is contrary to statute. Mrs. Sheratt's offence chiefly consists of not being registered under the name she now bears, but as Dr. Ellen Burt, her name before she married.

Tubercular Ulceration of the Upper Lip.—A case of tubercular ulceration of the upper lip was exhibited to the French Society

of Dermatology and Syphilography, Jan. 12th, 1899, by Dr. Danlos. A month previous the sore was thought to be a chancre; but neither induration nor enlarged lymphatics were observed, though the lesion was of six weeks' standing. Its worm-eaten surface covered with pus and the neatly shaped and cut edges of the sore resembled a chancroid. Under the frenum linguæ there was a rounded, sinuous ulceration, with no granulations, in the midst of which Wharton's duct opened. The patient, who was fifteen years of age, had not seen her menses for eight months: she had pulmonary phthisis. The ulceration of the upper lip, and that on the frenum linguæ were of bacillary origin, although the former assumed the clinical appearances of chancroid at the beginning of its evolution. Dr. Fournier, who discussed the case, stated that buccal phthisis of the lips was extremely rare. Dr. Besnier distinguished two varieties of bacillary ulcerations, the first occurring in tubercular patients; the second, of primary origin. The ulcerations in tubercular cases are obstinate and treatment is rarely successful. Primary buccal ulcerations are often easily cured by local applications of pure lactic acid.

Large Subcutaneous Saline Injections in Extensive Burns.—In a case of extensive burns, in which grave general symptoms (alternating delirium and coma, red, scanty urine, pulmonary congestion) threatened a fatal issue, Dr. Duret, of Lille, and Dr. Tommasoli have employed massive, subcutaneous, saline injections of from 1000-1200 c.c. morning and evening. Under the influence of this medication, which was continued for three days, the alarming symptoms disappeared, little by little, and the patient recovered. It seems certain, therefore, that, by diluting the blood and combating the grave symptoms, due to engorgement of the circulation from thickening of the blood, these injections are the very best treatment for extensive burns, accompanied by grave general phenomena.

Artificial Indigo.—Coal-tar has yet another conquest to record. It threatens to supplant the indigo trees of India and Java by supplying an indigo chemically identical with and infinitely purer than that hitherto on the market. As long ago as 1882 a German chemist, Dr. A. Von Baeyers, discovered several methods of obtaining indigo blue from cinnamic acid and bitter almond oil, which themselves are a product of coal-tar, but all were too costly for commercial purposes. Other chemists took up the work where Baeyers had

left it, and after years of toil it was announced eighteen months ago that "The Baden Aniline and Soda Works," at Ludwigshafen on the Rhine, were in a position to supply indigo obtained by an improvement of the process discovered by Dr. Baeyers, and at a price low enough to compete with natural indigo. The raw material for the new product is naphthaline, a constituent part of coal-tar, known to the public as an excellent remedy against moths, etc., and which, by a series of elaborate operations, is converted into indigo blue. The factory has gradually increased its producing powers and hopes soon to be able to export to other indigo-using countries. It may be mentioned that Germany already supplies 70 per cent. of the world's consumption of dye stuff from coal-tar.

Nursery Rhymes for Doctors.—The *Dietetic and Hygienic Gazette* gives the following rhyme, which may be of service to some of our confreres:

From Centigrade to Fahrenheit
'Tis easy to divine—
You first must use arithmetic
And multiply by nine.
The answer now divide by five,
And then you have in view
The very number that you seek
By adding thirty-two.

From Fahrenheit to Centigrade,
However, it is plain—
You first must take the thirty-two
And multiply again;
But this time only by the five,
And then you draw a line
Straight up and down, in order that
You may divide by nine.—*Southern Practitioner.*

Dr. Malherbe, of Nantes (*La Presse Medicale*), has employed the modifying influence of heat in the treatment of chancroid. The surface of the sore, having been completely dried with a wad of absorbent cotton, the large blade of the Paquelin cautery, heated to a red heat, is brought quite close without actually touching it. In a short time streaks of blood appear on the surface of the sore, and the procedure is stopped. The chancroid is thus transformed into a simple ulcer, which heals under a dressing of powder of any description in from eight to fifteen days. The pain caused by

exposing the ulcer to radiant heat is generally well borne. If necessary, the chancroid might, previous to the operation, be touched with a solution of cocaine.

Treatment of Aphthæ by Washing out the Stomach with Vichy Water.—At the Hospital of Assisted Children, Paris, Professor Hutinel employs a very simple procedure, which enables him, in most cases, to effect a cure of aphthæ in two days. The procedure consists in washing out the stomach twice a day with Vichy Water. Under the influence of this treatment, without making local applications to the child's mouth, the aphthæ disappear after three or four washings. Simultaneously the phenomena of diarrhea and dyspepsia disappear, and the accompanying erythema of the anal region is also relieved.

Prof. Schenck's Discovery.—The Vienna Medical Council is discussing the question whether Prof. Schenck's discovery determining the sex of an unborn child is charlatanism or a genuine scientific discovery. This action is being taken by the council in view of Prof. Schenck's submission of his plan to the Emperor of Russia, who is desirous of hearing the council's opinion.

Dr. Harley Smith has removed to 190 Spadina Avenue.

Dr. J. E. Graham went South for a holiday trip a week or two ago.

Dr. E. M. Hooper, lately on College Street, has moved to Merritton, Ont.

Congratulations to Dr. and Mrs. H. P. H. Galloway on the birth of a daughter.

Dr. G. R. McDonagh sailed from New York on January 28th, for a few weeks' sojourn on the Continent.

The marriage of Dr. Overton Macdonald and Miss Adelaide Sullivan took place at Holy Trinity Church on February 1st.

Dr. Montizambert has been appointed Director-General of Public Health at Ottawa. He will act as sanitary adviser to the Government, general superintendent of quarantine, and inspector of the Tracadie lazaretto. Dr. Montizambert has been superintendent of the Grosse Isle quarantine station, and for the past five years general superintendent of quarantine.

Obituary.

JOHN A. MULLIN, M.D.

Dr. John A. Mullin, one of the oldest and best known physicians in the city of Hamilton, Ont., died on Tuesday, Feb. 21st, having been ill for some time. He suffered from an incurable disease, and his death had been expected for some days. The deceased was born in New York City on June 10th, 1835. The family came to Canada in 1837, settling in South Dumfries, Brant County. After leaving school the deceased studied medicine under Dr. Rolph. He graduated in medicine at the University of Victoria College in 1859, became a licentiate of the provincial medical faculty in 1860, and after a temporary residence in New York and Toronto accepted a position on the medical staff of the Hamilton hospital. After his hospital experience Dr. Mullin settled down to general practice in that city, where he has labored all his life, and has long been esteemed as a leading physician of the district. Both the Ontario and Dominion Medical Associations at different times have placed him in posts of honor. For nearly thirty years he was one of the chief medical advisers to the Canada Life Assurance Company, all the policies of that company being subjected to his expert supervision, and to that of his colleague, Dr. Macdonald: and he did long and estimable service as a visiting physician to the city hospital. In politics he was a Liberal. He was a member of Temple Lodge, A. F. and A. M. He leaves a widow, four sons, and a daughter.

GEORGE H. ROHE, M.D., OF BALTIMORE.

We notice in the *New York Medical Journal* an announcement of the sudden death of Dr. Rohé in New Orleans, whither he had gone to attend a meeting. He was a well-known alienist and the superintendent of the Maryland State Insane Asylum. He died at the early age of forty-eight years. He was an active member of the American Public Health Association, and was elected its president at the last meeting in Ottawa. Dr. Rohé was an excellent writer and a highly respected member of the medical profession.

The Physician's Library.

BOOK REVIEWS.

The American Year-Book of Medicine and Surgery, being a yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs and text-books of the leading American and foreign authors and investigators. Collected and arranged with critical editorial comments by Drs. Samuel W. Abbott, John J. Abel, J. M. Baldy, Chas. H. Barnett, Archibald Church, J. Chalmers DaCosta, W. A. Newman Dorland, Louis A. Duhring, D. L. Edsall, Virgil P. Gibney, Henry A. Griffin, John Guiteras, C. A. Hamann, Alfred Hand, jun., Howard F. Hansell, Milton B. Hartzell, Barton Cooke Hirst, E. Fletcher Ingals, Wyatt Johnston, W. W. Keen, Henry G. Ohls, Wendell Reber, David Riesman, Louis Starr, Alfred Stengel, G. N. Stewart, J. R. Tillinghast, jun., and J. Hilton Waterman. Under the general editorial charge of Geo. M. Gould, M.D. Illustrated. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Canadian agents, J. A. Carveth & Co., Toronto.

When it is remembered that the mechanical part alone of the work in getting out by the first of every year so large a book as "The American Year-Book of Medicine and Surgery" takes months to accomplish, not to speak of the enormity of the task to be done by the different department editors in compiling the various sections, it is little to give even the due amount of praise to the publishers. Such a work, and one of such magnitude, in its entirety carried out in such a first-class manner, is a credit to any firm, no matter under what flag they live. We think this passing word of commendation to the mechanical side of the volume is only just.

Owing to the lamented death a few months ago of Dr. William Pepper, who had charge of the department of General Medicine, it was no easy matter to find some one or two writers of medical lore who could take a position such as his and fill it with the same grace, dignity and ability, that Dr. Pepper did. His was a remarkable career, and few members of the profession have fallen in harness who will be as much missed as he will. Dr. D. L. Edsall, associate in the Pepper Laboratory of Clinical Medicine, Philadelphia, and Dr. Alfred Stengel, Physician to Philadelphia Hospital, undertook to fill the place, and deserve credit for what they have accomplished. General Surgery has been contributed to by Drs. W. W. Keen and J. Chalmers DaCosta; Obstetrics has been taken charge of by Drs. Barton Cooke Hirst and W. A. Newman Dorland, and Gynecology is represented by Drs. J. Montgomery Baldy and W. A. N. Dorland. Drs. Louis Starr and Alfred Hand, jun., have contributed to the department of Pediatrics; Drs. John Guiteras and David Riesman, to Pathology; Dr. Archibald Church, to Nervous and Mental Diseases; and Drs. V. P. Gibney and J. H. Waterman, to Orthopedic Surgery. The only Canadian represented on the staff is Dr. Wyatt Johnston, of Montreal, who has charge of Legal Medicine, and in his work thereon has borne out his already enviable reputation. It is anything but an easy matter to present in so limited a space the latest facts on any subject or department without either appearing wearisome or going to the other extreme and being too brief. Ability is sometimes shown by a writer by being the reverse of voluminous, and "boiling down" to simple facts. We prefer never to be fulsome in the praise of any book; in fact we fear we have been accused in one or two instances of being a little cold, or at least lukewarm; but we wish to be fair at all hazards. Of the 1899 "American Year-Book of Medicine and Surgery,"

we can say that it is as nearly faultless as any book can be. It is, to be short and concise, a "boiled-down" concentrate of everything that is latest and best in medicine and surgery, reviewing facts which have been brought to the front during the past year in a manner that is able, essentially interesting and thoroughly comprehensive. W. A. Y.

Hallucinations and Illusions: A Study of the Fallacies of Perception. By Edmund Parish. London: Walter Scott. 6s.

This is a special edition of this work, prepared for the English publisher by the writer, and not merely a translation of the familiar German work. And by the way, too much praise cannot be given to the Walter Scott Publishing Co. for the service they have rendered students of science in the publication of their Contemporary Science Series, a collection of volumes which seem to replace the International Scientific Series of twenty years ago, just as the latter replaced the old Bridgewater Treatises of a still earlier day, long before Darwin, when classical etymology was the *summum bonum* of all human knowledge, and the expositors of the same felt a certain supercilious contempt for all who were not also occupied with the faded and rather dirty rags of ancient history, carefully collected in that great curiosity shop of obsolete notions and edifying mistakes at Oxford. Those who have bivouacked from childhood in the fresh pastures of the Delphin classics could not be expected to have much respect for a "naturalist." The naturalist got a certain amount of humble comfort, however, in religion, and his books read very much in this day like sermons. If he could not be brilliant and inspire the respect which scholars did, the insignificant man of science could at least be very good. The naturalist who wrote the following (in the standard work on zoology of the time) seems to have been most unctuously good:

"To view the Great Creator of all in that peculiarly *parental* character, in which He has been so frequently and touchingly represented to us by His inspired messengers; and to submit without a murmur to the severest inflictions of His Almighty hand, as a discipline of a father who alone knoweth what is good for his children, and who loveth even while he chasteneth. In the events of life, as in the phenomena of Nature he will be prepared to *trust* where he cannot *trace*."

No wonder the pompous professorial coteries who had complacently witnessed *de haut en bas* a long reign of scientific mildness of this sort found the rather sudden transition to the Origin of Species jarring and offensive. Ah, those Bridgewater Treatises! But to end an unpardonable digression.

In the present volume the writer makes an excellent classification of hallucinations and illusions—the most lucid I think I have met. A large mass of well-selected cases are brought forward, and while the writer is inexorable when examining cases of obviously spurious reasoning, there is no sign of impatience or prejudice in cases where the conclusions arrived at appear superficially logical, though it is the latter, whether in explaining the efficacy of a quack medicine or the disappearance of a star, which is most exasperating to an honest student of psychological phenomena. The material is mostly drawn from contemporary sources; though ancient literature, both Hebrew and classical, and especially Mediæval ecclesiastical literature offer a most tempting field for a writer upon hallucinations and illusions. The chapter upon Telepathic Hallucinations is also most timely.

Taken as a whole it would be hard to say whether the work is of greater medical or legal value. A clear knowledge of the subject would prevent many suits at the bar from terminating in the stupid pantomime of superstitious ignorance so frequently witnessed. E. H. S.

Studies in the Pathology of Sex. Vol. I., "Sexual Inversion." By Havelock Ellis. Watford, London: The University Press.

This valuable contribution to the growing literature of degeneration, by a conscientious, sincere and manly writer, whose honor and genius are beyond all

question, has been placed upon the *Index Expurgatorius*, and the author indicted indirectly in a London court for writing "an obscene libel with the intention of corrupting the morals of Her Majesty's subjects." That so immaculate a community as the one referred to should first learn of good and evil at this late day pathetically suggests "Paradise Lost," and one could almost shed a sympathetic tear as he contemplates the vestal innocence, thus rudely smirched, of a people among whom vice (and hypocrisy) are known to be altogether absent. The deliverance of the judge at this celebrated Bedborough trial suggests, on the other hand, by its insolence, the sixteenth century; by its stupidity, the fifteenth; by its ignorance, the fourteenth; and by the combined intelligence of the whole, the immortal "Dunciad," in which the name of Sir Charles Hall might with great propriety be enshrined. But to dwell longer upon such a pitiable spectacle of prejudice, tyranny and intolerance is an indignity to Havelock Ellis, an indignity to science, and an indignity to the liberty of thought of the twentieth century.

Until very recent years this subject has received hardly any serious consideration from the alienist, but has been left almost entirely to be treated by irresponsible writers, who were more or less charlatan in spirit. This has been exceedingly unfortunate, for a plain understanding of these matters might obviate much that has become unwholesome and perilous in our very midst. "In this particular field," the writer remarks, "the evil of ignorance is magnified by our efforts to suppress that which can never be suppressed, though in the effort of suppression it may become perverted."

Until the appearance of Krafft-Ebing's "Psychopathia-Sexualis," and similar works, these forms of perversion were only spoken of in a breathless whisper, and the deep-lying cause of not only these various forms of sexual perversion but also of many other social abnormalities which menace the present social system, was never isolated, though it has never been far to seek. Even at the present day any plain statement of these unnatural social conditions which enjoy the prestige of long usage and ecclesiastical tradition will arouse in many sources, as we have seen, the most violent antagonism.

Havelock Ellis, in this first volume of a long-contemplated work, has, however, fearlessly entered upon an exhaustive study of these conditions. Those in search of pornographic literature will find nothing of that description in this volume, but a plain statement of the more common forms of sexual perversion. The work has merits which will render it for many years a classic in this field of research; and by American readers it will for many reasons be preferred to other treatises upon the same subject, where less delicacy and tact have been used.

E. H. S.

Saunders' Pocket Medical Formulary, with an Appendix, containing posological table, formulæ and doses for hypodermic medication, poisons and their antidotes, diameters of the female pelvis and fetal head, obstetrical table, diet list for various diseases, materials and drugs used in antiseptic surgery, treatment of asphyxia from drowning; surgical remembrancer, tables of incompatibles, eruptive fevers, weights and measures, etc. By WILLIAM M. POWELL, M.D., author of "Essentials of Diseases of Children," one of the associate editors of the "Annual of the Universal Medical Sciences," etc., etc. Fifth edition. Thoroughly revised. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Canadian agents, J. A. Carveth & Co., Toronto.

The best word to apply as conveying the meaning and object of a book like this would be "Reminder." We can conceive of nothing better suited for a man who does not always carry his memory with him, and who requires to have some body or thing to be constantly coaching him so as to show him the path in which he ought to walk. The list of prescriptions given is good, and, we find, is not old and stale, but in many instances contains the newest preparations. In this edition the posological table has been thoroughly revised and largely added to, also including some of the most recent therapeutical agents

known to pharmacy. The table also gives the dose in both grains and grammes. A most useful table, found toward the end, is that dealing with eruptive fevers, giving in the case of each the period of incubation, day the rash appears, character of the rash, the day it fades, and duration of the illness. The chapter entitled "Surgical Remembrancer" is from the pen of a London surgeon, and contains points which would not come amiss at any time. The diet table is complete, and gives the various forms of food best suited for certain conditions.

The Psychology of the Emotions. By Th. Ribot. London: Walter Scott. 6s.

In this lucid treatise a writer of known eminence has endeavored to give without digression or diffuseness, a complete yet compact *résumé* of this subject as it stands to-day. The result is all that is to be desired. Professor Ribot's earlier writings upon cognate subjects are in the mind of all, and the student of the psychology of feeling will miss none of the old charm of style or symmetry of matter in the pages before us. The book is very aptly divided into two parts, the one dealing with general, the other with special psychology. In the latter more particularly one notices with surprise and pleasure how much originality the author has brought to bear upon considerations which, since the time of Locke, have been placed in every conceivable posture, and viewed in every possible light. Over the so-called writers of "metaphysics" Ribot has the advantage which the careful scientific writer always has over the bemused transcendentalist. E. H. S.

Sleep: Its Physiology, Pathology, Hygiene and Psychology. By Marie de Manaceine. London: Walter Scott. 3s. 6d.

There is perhaps no subject which has been more exploited by poets and romancers of all times, and less studied in the light of science in our own time. Friedrich Scholz, of Bremen, issued some years since a brief dissertation upon Sleep and Dreams, but it consisted merely of a few suggestions; and we have since seen no other work of any pretensions upon this most important subject until the present translation from the Russian appeared. The work is not a popular treatise in the usual sense of the word, but is exactly what the title indicates, and the reader will close the book with the feeling that he has had the last word upon the subject. The writer's scientific methods are exact, thorough and authoritative, and her prose manner, even in a translation, easy and clear. E. H. S.

Three Thousand Questions on Medical Subjects, arranged for self-examination, with the proper references to standard works in which the correct replies will be found. Second edition, enlarged. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1899.

Nothing is so apt to quickly prepare a student for examination during the day or two previous to that ordeal as to put himself through a system of quizzing. Of quiz compends, so called, there are many, the majority being most useful and helpful. This little booklet will prove a great boon to many, consisting of questions carefully selected and bearing upon the subjects apt to be taken up in the examination room. After each question are two numbers —the first one referring to the number of the volume in a list at the beginning of the book, and the second one to the page of that book on which a complete answer will be found.

Diet for the Sick. By Miss E. Hibbard and Mrs. Emma Drant, matrons at two large hospitals in Detroit. 103 pages, board sides; postpaid, 25 cents. The Illustrated Medical Journal Co., Detroit, Mich., publishers.

This is the third edition of this handy and popular little bedside book. The recipes for sick dishes have all been tried, and are those largely used by the Detroit hospitals where the two contributors of them served as matrons. Added to these are various diet tables, as for anemia, Bright's disease, calculus,

cancer, consumption, diabetes, dyspepsia, fevers, gout, obesity, rheumatism, uterine fibroids, etc., as given by the highest authorities. The booklet is intended to be given to the family by the physician, and for such purposes one-half dozen will be sent, prepaid, on receipt of $1.00.

Golden Rules of Surgical Practice, by E. Harry Fenwick, F.R.C.S.; *Golden Rules of Gynecology*, by S. Jervois Aarons, M.D.; *Golden Rules of Obstetric Practice*, by W. E. Fothergill, M.A., M.D., are the names of vest-pocket editions of three subjects, we might express it, put under a microscope, so small the space occupied and so magnified the result. Each one consists of reminders or rules as to what should be done under circumstances in which a practitioner is frequently placed. Each rule is clear and decisive, and will prove a source of assistance to many. They are published by John Wright & Co., of Bristol, England.

PAMPHLETS, REPRINTS, ETC., RECEIVED.

"Caries of the Teeth and Diseases of the Stomach." By Charles D. Aaron, M.D., Detroit, Mich.

"The Caustic Action of Arsenic in Treating Carcinomatous Growths Accessible from the Surface of the Body." By C. W. Simmons, M.D., Phila.

"Diseases of the Ear as a Specialty." By Emil Amberg, M.D., Detroit, Mich.

"The English Home Office and Public Sentiment in America and Great Britain." By Clark Bell, LL.D., New York.

ANNOUNCEMENTS.

J. B. Lippincott Company, Philadelphia, in the ninth annual announcement of "International Clinics," give notice that the price of this well-known quarterly, on and after April, 1899, issue, will be, for cloth binding, $2.25, and one-half leather binding $2.50, per volume; the annual subscription being thereby reduced from $12.00 and $13.00, for the respective bindings, to $9.00 and $10.00. New or renewal subscriptions in Canada may address their orders to Charles Roberts, 593*a* Cadieux St., Montreal.

The firm of E. B. Treat & Co., of 241 and 243 West 23rd Street, New York, announce that The Medical Annual for 1899 will soon be off press and ready for distribution. It is hardly necessary for us to say more than this, that this book has from year to year gained more favor with the profession, until to-day it is almost indispensable to the busy practitioner who wishes to get in small space the most recent points in the etiology, pathology and treatment of different diseases. "It includes a series of articles intended to bring the reader's knowledge up to date on subjects of modern investigation, and the present volume contains new matter of practical interest concerning almost every known disorder." Among the special articles will be found the following: "Practical X-Ray Work," by R. Norris Wolfenden, M.D., B.A.; "Advances in Skull Surgery," by Seneca D. Powell, M.D.; "Surgical Treatment of Paralysis," by Drs. Robert Jones, F.R.C.S., and A. H. Tubby, M.S., M.B. These articles will be freely illustrated, chiefly by reproductions from photographs. "Climatic Treatment of Consumption," by F. de Havilland Hall, M.D., F.R.C.P. An article on "Legal Decisions Affecting Medical Men," by William A. Purrington, A.B., LL.M., will be found interesting and pertinent. There will also be found an article on "The Chief Pathogenic Bacteria in the Human Subject," with descriptions of their morphology and methods of microscopical examination, by S. G. Shattock, F.R.C.S., the Pathological Curator of the Museum of the Royal College of Surgeons, London, illustrated by a series of finely colored plates.

Selected Articles.

THE WIND AS A FACTOR IN SPREADING INFECTION.

BY R. S. THORNTON, M.B., C.M., DELORAINE, MAN.

At this season of the year, when the prevalence of typhoid fever reaches its maximum, the physician is often sorely puzzled to account for the origin of many isolated cases occurring apparently without connection with each other or with pre-existing cases. Now that the bacterial nature of the infection in typhoid fever has been satisfactorily established, we can no longer fall back on unsanitary conditions as being the source of the outbreak of this disease. These can only be regarded as accessory and contributory causes. The drinking water is, of course, the favorite medium of introduction to the system, and it is well recognized that "the maximum prevalence of typhoid coincides with the lowest recession of the ground water from the surface of the soil." This condition favors the presence of organic matters in the wells, which will thus constitute a suitable nidus for the development of the typhoid germs; but the real problem is to account for the presence of the germ itself.

Typhoid has become so generally distributed in the Province that it may be regarded as endemic. We have few cities where large communities are receiving the same water supply. In the towns and villages, and on the farms, the water is almost entirely supplied from surface wells, and not a few people use rain-water collected in cisterns. These sources of water supply are all largely independent of one another. There are few watercourses. In some cases, especially in towns and villages, the wells may be contaminated through direct soakage of surface water containing the germs; but the great majority of cases cannot be so explained.

In trying to account, under these circumstances, for the general distribution of the disease, there is one factor which does not seem to have received the attention it deserves. The wind may be a very potent agent in the dissemination of disease. The tendency of bacteria to cling to dust particles is well known, and they may thus be carried to places where the conditions favor their development.

In this prairie land we are quite familiar with the long distances to which dust may be carried by the high winds, and the agriculturist recognizes this as one of the most active agents in distributing the seeds of noxious weeds. That this agency of wind is also at work in mountainous regions the following incident will show: Early this year there was a fall of dirty, yellow-colored snow at Engadi, in Switzerland. When the snow was boiled and allowed to settle there was a thick deposit of mud, which was found to contain iron in combination with other minerals—a particular combination characteristic of certain iron ores in Hungary, hundreds of miles away. The dust had been swept up from the plains and carried in the higher currents of the atmosphere till intercepted by the falling snow. What happened to the iron ore might also happen to typhoid and other germs which retain their vitality for some time, even when subjected to drying. They could be carried along with the dust particles into open wells, into vessels containing water, milk, butter, and so on; into stagnant sloughs, and be deposited on the roofs of houses, thence to be washed by the next rainfall into cisterns. In this manner many epidemics and isolated cases may be accounted for.

There are two points of practical importance to be deduced from the above. The first concerns the management of the individual case of typhoid. The physician directs the attendant to disinfect excreta-fæces, urine and sputa; but, as the thorough disinfection of a typhoid stool is a matter requiring time and trouble, and is very disagreeable, it is safe to say that it is never completely done. Indeed, there is often great carelessness in the disposal of typhoid excreta, and sometimes they are thrown out on the surface, whence they may be carried by water into the wells, but more likely, on the prairie, after becoming partially dried, to be swept with the dust to neighboring farms. In rural districts, all typhoid stools should be buried in a hole, away from the water supply, the bottom of the hole being first covered with a liberal quantity of lime or other disinfectant; or they should be burned.

The second point concerns the public health authorities, and has to do with the water-closets in use on the railway trains. These are, for the most part, open chutes down which the excreta are projected to the railway track. Many people with ambulatory typhoid, and patients in various stages of the disease *en route* to hospitals or home, use these closets, and thus typhoid stools are spread along the railway, ready for distribution by the wind all over the neighboring country. The same thing might happen were cholera ever to obtain a footing on this continent. But apart from the specific danger in such diseases, the method is unhygienic and offensive. It should not be difficult to attach a box below the chute and adopt some modification of the earth-closet, the excreta being removed and burned at divisional points along the line.—*Manitoba and West Canada Lancet.*

A CONTRIBUTION TO THE THERAPEUTICS OF IRON.

BY DR. GELLHORN.

THE sceptical assertions of Dr. Bunge, regarding the value of ferruginous medication, at the Congress for Internal Medicine of 1895, evoked an almost unanimous and vigorous opposition in the discussion which followed the reading of his paper. The doubts expressed by him in reference to an insufficient absorption of the inorganic preparations of iron could at that time only be controverted, in the main, by the results of practical experience derived from the administration of iron. However, Quincke even then pointed out that his investigations on the subject, which had not yet been concluded, had demonstrated the absorption of iron preparations given for medicinal purposes, and their utilization in the body. In 1896, at the Congress for Internal Medicine, Quincke reported the results of his experiments which meanwhile had been completed, and which confirmed in every respect the above-mentioned statement. He made it his aim to trace the course of iron along the intestinal canal, by means of micro-chemical reactions, and for this purpose fed white mice for a number of days with cheese, to which had been added various ferruginous preparations. The animals were killed during feeding, or after the lapse of a certain interval, and the viscera, especially the intestinal canal, hardened in alcohol, cut open and examined for the presence of iron with sulphide of ammonium as a reagent. It was thus found that iron is absorbed exclusively in the duodenum, and this applies both to the iron in the food and that administered medicinally. It was detected in the duodenal epithelium and in the stroma of the duodenal epithelium and in the stroma of the villi, and is visible even to the naked eye. Furthermore iron is found deposited especially in the liver cells, in a form perceptible on microscopical examination, and in rare cases could be detected by microscopical means in the cortical tubules of the kidneys.

These investigations of Quincke have demonstrated incontestably that the favorable results which have been obtained, since olden times, from the administration of iron are actually attributable to its absorption, and not, as Bunge would have it, to accidental circumstances, to diet alone, or even suggestion. Control experiments in this direction with indifferent medicaments are readily carried out, and were repeatedly mentioned at the Congress of 1895. It should be added that these control experiments were followed by no change, or only by a transient improvement in the condition of the patient.

At the last Congress for Internal Medicine, the subject of the therapeutics of iron was so thoroughly ventilated by the foremost clinicians, as well as by numerous physicians in late years, that a

new contribution would appear superfluous. This subject, however, is of such immense importance to the general practitioner, that a cumulation of material is necessary in order to eliminate the least doubt as to the efficacy of a therapeutic measure which, originating at first on the basis of speculation, and later supported by the results of empirical observations, has finally been demonstrated to be of value by exact experimentation.

In the following I will only discuss the clinical aspects of this question. I was encouraged in undertaking this work by my honored teacher, Dr. Mackenrodt, who has assisted me in every possible way. In the management of chlorosis and anemia and the host of sequelæ to these diseases, the physician would be powerless if he had not in iron a specific, or at least a potent and indispensable adjunct to his other therapeutic resources. The patients, who belong for the most part to the working classes, give in the main the same group of symptoms: amenorrhea, scanty or profuse, weakening, irregular, usually premature, menses; headache, anorexia and dyspepsia; neuralgias, and almost invariably marked lassitude, which interferes markedly with their ability to work. In these cases prompt and radical help must be afforded, in order to restore to the patients their full working capacity as soon as possible. It is well known that the therapeutic value of the various iron preparations differs greatly. This is shown *a priori* by the abundance of manufactured products of this kind. My experience relates chiefly to three preparations, pilulæ chinini cum ferro, formula magistralis of Berlin, liquor ferri albuminati, and the neutral Pepto-Mangan (Gude). My results with the first of these three remedies have been very indifferent, while with the liquor ferri albuminati of the pharmacopeia they were somewhat better. I have instituted accurate examinations, however, with only Gude's Pepto-Mangan, and the data given further on relate to this remedy alone. Owing to my limited experience with the many other preparations employed by various authors, I would not designate the Pepto-Mangan as a universal remedy, or as the only efficient preparation.

Still another remark: there can be no doubt that our medical intervention, no matter of what kind, is materially assisted by psychical impressions. This applies especially to our female patients, who are extremely susceptible to mental influences of this character. Hence, it may readily occur at the commencement of treatment that the previous disorders are less strongly felt, and it is therefore unfortunate that an objective criterion for the existing improvement is not at our disposal, as such we would regard regular examinations of the quantity of hæmoglobin in the blood. In the observations reported these were made with Gower's hæmoglobinometer. This instrument is very convenient, and is superior to Fleischl's apparatus for the use of the general practitioner, especially on account of its cheaper cost. The tests are very exact; any existing errors are the less to be considered since they occur

uniformly and in about the same degree during the entire course of the experiments.

That dietetic treatment alone may be successful in anemic and chlorotic patients was laid down as a dictum by Immermann and Reinert at the Congress for Internal Medicine of 1895. It is natural to suppose that poor and ill-nourished persons would gain in strength under the influence of a proper and invigorating diet; nevertheless, after eight to fourteen days a cessation in the improvement occurs and the old disorders return. These authors, as well as Nothnagel and v. Ziemssen, consider an invigorating diet as only a valuable adjunct; both of the latter, moreover, regard rest in bed for several weeks as an important factor in the cure. Since several years Mackenrodt has also instituted a large series of observations of this kind, not yet published, in which, for purposes of control, he employed quantitative estimation of the hæmoglobin. It was found by him that under the influence of hygienic and dietetic regulations alone the quantity of hæmoglobin in the blood increased only at the commencement of treatment, and then only in a dilatory manner.

In the case of one of my patients I proceeded as follows: I prescribed Pepto-Mangan (Gude), one teaspoonful three times daily after meals, and regulated the diet in accordance with the directions furnished with preparation. Sour and fatty foods, as well as raw fruits, are to be avoided under all circumstances. Fritsch ("Diseases of Women," 1892, p. 469) advises, indeed, that the desire for acids manifested by chlorotics should be gratified. According to my experience, however, this craving for acids is to be regarded as a pathological condition of the alimentary tract, which is made worse by further supply of acids, but can be successfully overcome by an unstimulating diet. In cases where the social conditions in any way permitted, I allowed the patient to take a small glass of red wine three times daily, but never during a period of one hour before and after the administration of the medicament, in order to prevent the combination of the tannic acid contained in the wine with the iron. The use of potatoes was restricted as much as possible, at least during the first four weeks. Furthermore, I resorted to the dietetic regulations customary in these cases, but changed them to advantage when, as so often happens, obstinate constipation was present, following in this respect the suggestions of Hebra, which have recently been again advocated by Ruge (Transactions of the Obstetrical and Gynecological Society of Berlin, 1, III, 1896), and obtained generally excellent results. In contrast to several authors who made it a practice to remove any existing dyspepsia before resorting to the use of iron, I have followed the method of v. Ziemssen and Baumler, of at once administering iron—unless the presence of a severe gastric affection, especially ulcer of the stomach, could be positively determined—and observed as early as the end of one or two weeks an increase of appetite and subsidence of the gastric disorder.

I would lay especial stress upon systematic exercise in the open air. I ordered the patients, who, with but two exceptions, were treated out of bed, to take a stroll at mid-day, at first, of five to ten minutes' duration. At the end of three to four days they were allowed to remain outdoors for five to ten minutes longer.

After each walk they were advised to take off their corsets, put on their slippers, and rest for an hour on the sofa. Under this treatment the lassitude invariably vanished after a time.

In the manner thus described I have treated in all about sixty patients. In twenty-four cases I instituted quantitative estimations of hæmoglobin at regular intervals of three, five, or eight days. Under normal conditions the quantity of hæmoglobin in woman amounts to 12.59 per cent. when estimated in comparison with the other constituents of the blood. Among my cases the lowest amount met with was, in a single instance, 30 per cent. of the normal, that is to say, of the above 12.59 per cent. Next to this was the following case with 32 per cent. of the normal:

Miss W. G., twenty-two years old, seamstress, related that she had been under treatment for four years for chlorosis. Since the age of nineteen her menses had been scanty, occurring before the usual time, and of three to eight days' duration. On September 26,th 1895, a *remotio secundinarum* occurred, after an abortion induced in the fourth month. At present she complains of darting pains in the upper portions of the lungs, headaches, and rapid loss of strength.

January 9, 1896, anemic appearance; physical examination, especially of lungs, negative. Quantity of hæmoglobin, 32 per cent. Ordered Pepto-Mangan (Gude), diet, etc.

January 13, 1896, considerable improvement of the general condition. Hæmoglobin, 45 per cent.

January 17, since previous day, diarrhea, due to gross errors in diet, troublesome eructations. Ordered tinct. opii. 15 drops, three times daily. Hæmoglobin, 47 per cent.

January 21, improved after use of tinct. opii., no more gastric pains or eructations. Headaches have completely disappeared, lassitude less marked. Hæmoglobin, 55 per cent.

January 31, condition unchanged, ceased menstruating on previous day, the flow having lasted five days.

February 8-28, patient feels well and no longer complains of pains in the lungs. Appetite and bowels regular. Hæmoglobin, constantly 55 per cent.

March 5, no change. Hæmoglobin, 62 per cent.

March 11, Hæmoglobin, 68 per cent.

March 27, Hæmoglobin, 77½ per cent.

Unfortunately, as in most of these cases, the patient's visits ceased as soon as she felt entirely capable of going to work. As a matter of fact, the increase of hæmoglobin in this case was tardy, as in four other cases in which the quantity at the beginning was

34, 35, 37 and 38 per cent. of the normal. In eighteen other instances in which the initial amount was higher, viz., 42-75 per cent. of the normal, progress was more rapid as a rule.

This is most strikingly illustrated in the following case:

Miss C. B., aged fifteen years, complains of violent headaches, visual disorders, loss of appetite, a feeling of pressure over the stomach, constipation and general lassitude.

June 2, 1896, *status presens:* mucous membranes pale; physical examination, negative; heart, normal; quantity of hæmoglobin, 45 per cent. Prescribed as in above case.

June 9, headache has disappeared; condition otherwise unchanged. Hæmoglobin, 45 per cent.

June 16, improvement. Hæmoglobin, 51 per cent,

June 23, decided improvement. Hæmoglobin, 55 per cent.

July 8, patient free from complaints; cheeks ruddy; lips and conjunctiva red. Hæmoglobin, 78 per cent.

July 23 and September 24, continued good health.

I also derived exceedingly favorable results from the use of Pepto-Mangan (Gude), in patients who came to us for operations after having been exhausted by protracted hemorrhages. Of course convalescence in such cases is delayed; the system recuperates but slowly from the double injury inflicted by the losses of blood and the operative intervention. Digestive disturbances are especially apt to be troublesome. In these cases ferruginous medication often produces remarkable improvement.

I cannot close this paper without calling attention to the beneficial influence exerted by Pepto-Mangan (Gude), in anemic neuralgias, and as an illustration of its effects in this class of cases, add in brief the following history of a case.

Mrs. K., aged thirty-five years, very pale and ill-nourished, suffers from intercostal neuralgia on the left side.

January 30, 1896, quantity of hæmoglobin, 68 per cent. of the normal.

February 5, in the meantime has suffered on two days with violent headaches; intercostal neuralgia persists; appetite good; no gastric disturbances. Hæmoglobin, 69 per cent.

February 12, no longer troubled with headaches, with exception of one attack of neuralgia, in the area supplied by the left supra-orbital nerve. The paroxysms of pain on the left side of the chest have become less frequent. The lassitude has subsided. The mucous membranes are still anemic. On the whole, the patient feels better and more vigorous than before the commencement of treatment. Hæmoglobin, 75 per cent.

February 18, considerable improvement of neuralgias; no headaches nor digestive disturbances. General health improved. Menses appear earlier than previously, this being the second day of the flow. Hæmoglobin, 73 per cent.

February 26, during the preceding days transient deteroriation of her con-

dition, owing to mental excitement. Menstrual period has been normal. Hæmoglobin not estimated.

March 2, patient no longer complains. Intercostal neuralgias have ceased to occur, except on rare occasions. Hæmoglobin, 76 per cent.

March 13, health good in general. Iron discontinued on account of gastric disturbances, which are said to result from excitement. Ordered strict diet and iron to be resumed.

March 19, complete restoration to health. Hæmoglobin, 82 per cent.

That the final estimates did not yield the normal quantity is not surprising since it is frequently somewhat reduced even in healthy persons. At any rate, the objective and subjective state of the patients in the above cases, as well as in the others not reported in detail, afforded the impression that a radical cure with complete restoration of the ability to work has been effected.

It must be conceded that in matters of therapeutics it is always difficult to appreciate correctly the relation of cause and effect, and to eliminate the factor of accidents in estimating the efficiency of any plan of treatment And in order to arrive at a positive and unbiassed decision, it is necessary to resort to a series of observations and control experiments of so great an extent that the single observer, even though he have at his disposal a vast amount of material, is only capable of furnishing a small contribution in the discussion of these questions. Furthermore, a certain amount of latitude must always be allowed to individual judgment.

Yet, while fully conscious of these limitations, I think I am justified in asserting that in my therapeutic trials with Pepto-Mangan I obtained all that can be rationally demanded. And I further consider myself warranted in stating that in view of the unquestionable necessity of ferruginous medication in certain troublesome constitutional affections this preparation acts as a most efficient and useful auxiliary to our therapeutic efforts.—*Therapeutische Monatshefte.*

What did the Rector Mean?—For the sake of the rector, who is young and artless, let his name be unknown. But the story is true and it occurred last week, and each woman is busy with its narration. There is an organization in the church; what its uses are only the members know, but it is called "The Little Mothers of the Church." Now, this rector was giving out a notice about it the other Sunday, and how a woman could join it, etc.; and then he made this announcement, which created a flutter and a gasp: "Any lady wishing to become a Little Mother can do so by calling on the rector any Friday in his study attached to the church." And a murmuring wave, like a sudden wind in the forest, went over that congregation.—*San Francisco News Letter; Pacific Medical Journal* (September).

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Original Contributions.

TREATMENT OF PULMONARY AND LARYNGEAL TUBERCULOSIS BY THE NEW ANTIPHTHISIC SERUM, T.R. (FORMULA OF FISCH), WITH REMARKS ON THE ETIOLOGY OF THE DISEASE.*

BY W. FREUDENTHAL, M.D., NEW YORK.

ALTHOUGH much thought and discussion has been devoted to the etiology and prevention of tuberculosis, we are still in doubt regarding a great many matters relative to these topics; among others, for instance, the site of entry of the tuberculous virus in the organism.

Having expressed my views regarding the etiology and prevention of tuberculosis at some length elsewhere, I will devote the few remarks which I wish to make now to the discussion of two points in the prophylaxis of the disease which I have not yet touched upon. One of these points is light.

It cannot be denied that sunlight is extremely essential for the health of all animals; still the fact that it is an important factor in the prevention of tuberculosis has not met with the general appreciation which it deserves. In corroboration of its importance, permit me to quote from the last report of the Cattle Commissioners of Massachusetts.†

It says (p. 57): "Light is another essential in the thorough disinfection of barns that is too often neglected. The majority of barns have only one or two small windows, rarely larger than, say, eighteen or twenty-four inches square, usually thick with dust, and giving a 'dim religious light' or none at all. Only very few barns have windows sufficiently large to give free admittance to the sun-

* Written specially for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

† "Annual Report of the Board of Cattle Commissioners of the Commonwealth of Massachusetts." Boston, 1898.

light. Owners of cattle do not seem to realize that sunlight is just as essential to the health of animal life as it is to plant life . . . and even at the present time it seems to be impossible to teach some people that light is not detrimental to the health of dairy stock. It is especially necessary where, through want of fresh air and exercise, the circulation is sluggish and the system depressed.

"Light stimulates the circulation, and with increasing oxidation more CO_2 is given off, and the functions of the whole body are quickened and enlivened; but sunlight also retards the growth of germ life, and the vitality of certain forms of bacteria, *including tubercle bacilli*, is destroyed in a few hours' time by the direct action of the sunlight."

While we have numerous facts proving that the frequency of pulmonary diseases and glanders is diminished by an increased supply of air and light, I shall cite one more which is related by Prof. Law and which bears on this subject. He says, according to the above report: "In 1877 I recognized the existence of tuberculosis in the Jersey herd of ..... of Troy. The worst were slaughtered, but some incipient cases in young animals were turned out in a pasture by themselves, where they passed the summer in apparently robust health, but they began to droop when returned to the barns in the fall."

Although we are aware of these facts—I need only remind you of the experiments made long ago by Dr. Trudeau and others—we forget and neglect the lesson taught by them. And these lessons are not only of importance in the treatment of cases in which tuberculosis exists, but also in the prevention of the disease in those in which its appearance is to be feared.

If the Cattle Commissioners of Massachusetts ask for more light in the barns of their herds, can I be considered unreasonable if I make a plea for more light for the human beings of New York? What do we find in regard to this matter? Let us consider one of the modern residences on Fifth or Madison Avenues, belonging to people who can afford any luxury. Unless the house is situated on a corner, the light, as a rule, comes in only through the front part, the rear generally receiving no natural light at all, as every inch of the available space has been built upon. And even in the front, the sun rarely has a chance of getting into the rooms, for there are one, two or three pairs of curtains and portieres preventing this and allowing only a "dim religious light" to filter through, just as in the barns mentioned above. But it is evident that we need much sunlight, just as well as animals and plants. Consequently no one will be surprised when I say that I advise my phthisical patients to get as much sunlight as possible. I therefore do not take the pessimistic stand of a great many scientific men of to-day who say any climate is good, provided the air be pure. True, pure air is very important for tuberculous patients, but sunlight is an additional factor and one of vast importance which must not be overlooked.

Where this beneficial healing power, the sun, is not available,

other means have been tried as a substitute therefor. Thus the electric light therapy has been introduced in Berlin by a chemist, Dr. Gebhardt, a pupil of von Helmholtz and Hoffmann, and only lately Dr. E. Below of Berlin (*Berl. klin. Woch.*, p. 265, 1898). The results are said to be very good. I myself have experimented in that field for years, but shall publish my observations perhaps sometime later, as they are by no means ripe for discussion.

We come now to another point—the quantity of fresh air. For the same reason that the sunlight is excluded, no air can get into the houses through the rear windows. And with the exception of the weekly cleaning, the front windows are to all intents and purposes always closed for fear that dust from the streets might get in and spoil the expensive curtains and still more expensive furniture. If such is the case in the so-called best houses, what can we expect of the others? Of the poorest of them, the tenement houses, so much has been said that I do not need to repeat it here. My object is to show that tuberculosis really can and does develop in the richer houses to the same extent as it does in the poorest. Nor is the dwelling the only place in which tuberculosis can develop. Look at the older school-houses, overcrowded, with poor ventilation and lack of light; look at the factories and all the other places where human beings are crowded together for hours every day, and you will not be surprised that many a disease develops under such conditions. One of them is tuberculosis, and another post-nasal catarrh. About the connection of these two diseases I have written considerable. Permit me for a moment to quote from a former paper on this subject:

In post-nasal catarrh, we find "ciliated epithelium, pathologically changed or entirely absent. We find a tenacious, adhesive, stagnating mucus, whose influence upon the development of bacteria can only be a favorable one. We finally find glandular tissues, which only too easily take up and harbor in their crypts all noxæ."

Later on, I said: "According to our present experience, there is no doubt that infection with tuberculosis most frequently takes place through the respiratory organs. But I agree with Ponfick, with whom, by the way, Ziem also coincides, when he declares that the lungs can no longer be looked upon as the principal organs for the entrance of the tuberculous poison. To me it was always incomprehensible how the tubercle bacillus, during respiration, should penetrate the many tortuous respiratory passages, to finally build its nest at the apices of the lungs, which are so difficult to reach. Why do not other microscopic particles, inhaled in the air, do the same? Why does not soot, for example, not only enter the nose but also all parts of the lungs? If we suppose that tubercle bacilli are drawn away mechanically by the air current, I will not admit that, when inhaled in moderate quantities, they reach the apices of the lungs without their progress being previously checked. I once more refer to the investigations of Arnold, Kayser and Hildebrandt: whether dust or bacteria had been inhaled was

a matter of no account: so long as breathing was continued through the nose the particles of the air were retained in the nose and nasopharynx, and the lungs remained free. Nor is this to be expected otherwise. Imagine for the sake of simplicity, the air current passing in a straight direction toward the retropharyngeal cavity. Here it turns at an acute angle, and it would be more than peculiar if the bacteria would not be held there by the moist mucosa. On the contrary, one must suppose that the retropharynx keeps back the bacteria to a greater extent than the nose itself. But also deeper down the air current is deviated at the entrance into the larynx by the various prominences, such as the epiglottis, arytenoids, etc., and again, and more especially at the bifurcation of the trachea."

There is still another factor that makes the retropharynx the *locus minimæ resistentiæ*. The different kinds of bacteria, especially the cocci, according to the experiments of Babes, are prone to prepare the soil for the tubercle bacilli. Thus, this factor also facilitates the entrance of the tubercle bacillus into the mucosa of these parts. Once having penetrated the lymph tissue, it wanders with the lymph stream until it gets into larger lymph vessels, and finally into the thoracic duct. On its way thither the bacillus is quite frequently hindered or detained by stoppage of the vasa efferentia, etc., and the latent tuberculosis, so commonly met with, originates. On the other hand, the thoracic duct becomes the main source for the further spreading of the germs. From here the infection of the apices of the lungs, the *loci minoris resistentiæ*, proceeds.* It is evident that the organism frequently reacts against the invasion of the tubercle bacillus, and the glandular swellings, so common in children, appear. These lymphomata, often nothing else than a consequence of an existing retropharyngeal affection, bear the same relation to this condition as the inguinal bubo does to the primary affection in the genitals.

After bringing many more proofs in confirmation of my theory I came to the conclusion that the hypertrophy of the lymphoid tissue at the vault of the pharynx is nothing more than the expression of this reactionary inflammation. At that time I had overlooked an article by Trautmann, of Berlin, in which he says: "Although by careful examination of the hyperplastic tissue at the vault of the pharynx, of the follicles and of the secretion, neither giant cells nor tubercle bacilli were found, I nevertheless consider tuberculosis the cause of the hyperplasia. . . . A communication made to me verbally by Robert Koch also speaks in favor of tuberculosis being the cause of the hypertrophy. After injection of tuberculin he found at first a rise of temperature, then more swelling and hyperplasia of the lymphoid tissue, and after further injections both disappeared and the hyperplasia was cured, but not until treatment extended over several months."

I cannot mention here all the facts that have been elicited in

* W. Freudenthal: "Kleinere Beitrage zur Ätiologie der Lungen-tuberkulose," *Archiv fur Laryngol.*, Bd. V., 1896, and *Annals of Otology*, February, 1897.

favor of my theory; I will only say that Pluder and Fischer,* in an article that appeared almost on the same day as mine, came to very similar conclusions. They believe that the five cases which they mention must be considered as latent and *primary* tuberculosis. They explain their ideas about the propagation of the tuberculous virus in the system in a very interesting manner, for details of which I would refer the reader to the original paper.

I have examined numerous patients and found that a great many have affections of the retropharynx, and that of these a certain percentage shows tuberculous lesions in the lungs. I did not draw any definite conclusions in regard to the percentage of cases of phthisis among those affected with nasal and post-nasal disease, but attempted to show that all the numerous facts brought out in favor of my theory, as well as my own and others' statistics, must convince everybody that we can no longer deny that a direct connection exists between affections of the retropharynx (this is especially my idea) or nose and general tuberculosis; in other words, that the disease commonly called "catarrh" frequently leads to tuberculosis.

And now comes Dr. E. Fletcher Ingals,† of Chicago, who, has asserted that "catarrh" has a tendency to prevent tuberculosis. As he alludes to my article, I am, in the interest of the important question involved, in duty bound to answer him. Dr. Ingals says that "38 per cent. of the human family at one time or another suffer from pulmonary tuberculosis, as against about 75 per cent. with diseases of the upper air passages, or nasal catarrh." This is as much as, or even more, than I expected, but he says further, that of these 38 per cent. with tuberculosis, a comparatively few suffer from nasal disease. Thus, for example, of his 830 cases of pulmonary tuberculosis only 237, or about 28 per cent, showed some nasal trouble. "Of the 237 cases which make up this 28 per cent., I find that 168 consisted of exostosis and deflection of the septum, which . . . is present in 50 per cent. of all persons of the European race; *therefore, many of these would have had no possible influence* in causing the pulmonary tuberculosis." I fail to see the logic of Dr. Ingals' conclusions. Because 50 per cent. of all Europeans have deflections of the septum, must we exclude them from our statistics? Are deflections of the nasal septum to be considered normal because so many civilized people have acquired them? We might as well say that gonorrhea in man is a normal condition because so many cases exist. Deflection of the nasal septum is a pathologic condition which also tends to produce post-nasal catarrh, and I consider it a very important etiologic factor in favor of our theory. But Dr. Ingals is not satisfied in deducting all these cases. He goes on to exclude other possibilities by saying: "Further, my records show that of all the cases of pulmonary tuberculosis, 1,272 in number, only 27 of the patients, or

*F. Pluder und W. Fischer: "Ueber primære latente Tuberkulose," etc., *Archiv fur Laryngologie*, Bd. IV., p. 372.

†*Annals of Otology, Rhinology and Laryngology*, February, 1898, p. 173.

about 2 per cent., complained of having had any previous nasal disease, which is 4 per cent. less than the normal average." His position must be very weak, if he is forced to fall back on such arguments. Were we to be guided by the complaints of the patient, we would, for instance, still have to treat many cases of persistent headache as malaria, and fill the patient with quinine and similar drugs, as we formerly did. We would never be justified in removing polypi, etc., in cases of asthma, because the patient dose not complain of his nose.

About thirteen years ago, while pursuing other investigations, I examined the nasal passages of every patient, 500 altogether, who came to the Hospital for the Ruptured and Crippled, this city, and was surprised to notice how seldom the patients complained of their noses. I remember several instances in which grown persons could not breathe through their noses at all, since they were almost hermetically stopped up by numerous polypi, etc., and nevertheless they had no complaints to make. In regard to tuberculous patients, I examined 75 of the consumptives at the Montefiore Home. Of these, 37 did not complain at all about their throat or nose, and 38 did, *i.e.*, about half on each side. Of the 37 patients who did not complain, not less than 23 showed marked abnormalities in their nasal passages, and in only 14 there were no marked changes at all.

Although these statistics are not extensive, I am sure that they will prove convincingly that consumptives suffer from nose and throat troubles, not only as much as, but more than other people. Two-thirds of those who did not complain had some kind of affection of the throat or nose, and naturally the others who did complain showed lesions of the parts also.

E. F. Wells, of Chicago, did not believe in the conclusions drawn by Dr. Ingals, nor did many others, but they had to take the doctor's statistics. I hope that I have succeeded in convincing more to day that my conclusions were correct.

We now come to the equally important part of our paper, the therapy. I shall discuss only one mode of treatment, viz., that with the new tuberculin T.R.

The question of the treatment of tuberculosis with the new tuberculin T.R. has been a burning one since Koch published the results of his experiments with the agent about two years ago, and this question is of still greater importance at present. Many articles both *pro* and *con* have been published, and very many discussions have been held on this subject, but I will limit myself to the latest publications on this topic.

It was during the course of certain experiments which I was making with tuberculin T.R. that I came across three publications from Prof. v. Leyden's clinic, which almost made me give up my investigations. On looking over these papers, however, they did not seem to me to be altogether exempt from criticism. The first paper was that by Dr. Huber, assistant to v. Leyden, who made experiments with the new tuberculin T.R. on animals, and arrived at the conclusion that it had no therapeutic value. His

deductions were contradicted by Prof. Brieger, Dr. Petruschky and others. Still we must admit that his conclusions were correct in one point, viz., that in one or two of his experiments virulent tubercle bacilli were present in the new tuberculin. But since last September this defect has been remedied. Nor were his practical experiments on patients more successful. In five advanced cases there was no influence visible. In two cases that were doubtful the status of the patient remained unchanged. In three cases which were suitable for this treatment, in which, however, the injections were interrupted prematurely, one patient was somewhat improved while the others remained unchanged. In four cases in which the treatment was specially indicated, the condition of one patient remained unchanged; the second was almost cured, but only temporarily, as he afterwards developed miliary tuberculosis, and the other two were materially improved. Similar results were obtained by Dr. Burghart in the female wards of v. Leyden's clinic. In the same number of the *Berliner klinische Wochenschrift* (p. 146, 1898), Dr. Alb. Raude reports three cases of pulmonary tuberculosis treated with T. R. One patient got worse and died, while the two others improved markedly; one gained six pounds and the other twenty pounds in weight.

In the Berlin Gesellschaft der Charite-Aerzte, February 10th, 1898, there was a heated debate on this topic. This society was apparently divided into two parties; on the one side was the Institution for Infectious Diseases (Koch, Brieger, Marx), and on the other side were the clinicians. As the result of this discussion it might be said in the words of the president, Dr. Schaper, that we are too far away to be able to form any conclusive opinion on the effects of the new tuberculin, but one point seems to be evident, viz., that it is effective only in the relatively pure cases of bacillary tuberculosis, not in so-called mixed infections.

Last July, in St. Louis, I had the opportunity of seeing Dr. Carl Fisch's experiments. He was immunizing horses with this new tuberculin T.R., and he was fairly confident of producing in this way a serum that would contain more antitoxic properties than former serums. All of his experiments were published in the *Journal of the American Medical Association* for October 30th, 1897, and as they seemed to me not only scientific but rational, I overcame my antagonism against all these extracts, etc., and gave this antiphthisic serum a trial. I commenced using the injections at the Montefiore Home for Chronic Invalids on February 24th, and stopped April 8th, 1898. With but few interruptions the four patients received daily injections of $\frac{1}{2}$ c.cm. I increased the dose rapidly to 1 c.cm., but had to reduce it again in the case of three patients on account of the severe reaction. Only one patient could stand 1 c.cm., and that only for a comparatively short time. This patient received injections of the old tuberculin seven years ago in the German Hospital, and he could stand these new injections much better than any of the other three patients. The histories are as follows:

Case 1. Marcus G., aged 41; occupation, furrier; nativity, Hungary; married. Family history negative. Previous history, sick since April 1st, 1895. Began as inflammation of lungs; four months in bed. August, 1896, hemorrhage; no nightsweats; loss of flesh. At present he coughs much; expectoration is profuse and yellow; no nightsweats: no loss of weight; bowels regular, appetite poor.

Physical Examination, February 24th, 1898.—Chest flattened; retraction over both clavicles, especially right; expansion slight. Dulness at both apices, especially right; medium coarse, moist rales over upper right lung. Fine moist rales right interscapular region. Moist rales all over right lung. Vocal resonance increased, right side. Few moist rales on left side anteriorly. Harsh respiration with prolonged expiration. Slight bronchophony.

Injections.

Feby.	24,	1898,	at 2 p.m.....	Serum of	Feby.	14, 1898,	m. viii.
"	25,	"	at 2 p.m.....	"	"	" "	m. xii.
"	26,	"	at 2 p.m.....	"	"	" "	m. xiv.
"	27,	"	at 3 p.m.....	"	"	15, "	1 c.c.
"	28,	"	at 5.30 p.m.....	"	"	" "	1 c.c.
March	1,	"	at 1.30 p.m.....	"	"	" "	1 c.c.
"	2,	"	at 11.30 p.m.....	"	"	" "	1 c.c.
"	3,	"	no injection.....	"	"	" "	....
"	4,	"	" "	"	"	" "	....
"	5,	"	" "	"	"	" "	....
"	6,	"	at 3 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	7,	"	at 4 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	8,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	9,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	10,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	11,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	12,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	13,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	14,	"	at 4.30 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	15,	"	at 3 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	16,	"	at 4.30 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	17,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	18,	"	at 2 p.m.....	"	"	26, "	$\frac{1}{5}$ c.c.
"	19,	"	at 3 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	20,	"	at 3 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	21,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	22,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	23,	"	at 12 noon.....	"	"	" "	$\frac{1}{5}$ c.c.
"	24,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	25,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	26,	"	at 3 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	27,	"	at 4 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	28,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	29,	"	at 3 p.m.....	"	"	15, "	$\frac{1}{5}$ c.c.
"	30,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	31,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
April	1,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	2,	"	at 3 p.m.	"	"	" "	$\frac{1}{5}$ c.c.
"	3,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	4,	"	at 2 p.m.....	"	"	20, "	$\frac{1}{5}$ c.c.
"	5,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.
"	6,	"	at 2 p.m.....	"	"	" "	$\frac{1}{5}$ c.c.

HISTORY OF CASE I.

Date.	Weight.	Temperature.	Pulse.	Respiration.	Cough.	Expectoration.	Expectoration Microscopic.	Night-sweats.	Appetite.	Sleep.	Feeling.	Reactions.	Urine.
Feby. 24	110	99, 100.8	....	....	Much.	Profuse, yellow.	Positive.	None.	Poor.	Good.	Good.	None.	....
25	....	98.2, 99.1	100, 94	20, 22	Little.	Little.	Positive.	None.	Poor.	Good.	Good.	None.	....
26	....	98.1, 99.5	94, 96	18, 24	Little.	Little.	....	None.	Poor.	Very restless.	Good.	None.	....
27	....	98.1, 99.5	90, 96	20, 18	Little.	Little.	....	None.	Poor.	A few hours.	Good.	None.	....
28	....	98.5, 100	90, 95	20, 24	Little.	Little.	.. .	None.	Poor.	A few hours.	Good.	None.	....
March 1	....	98.5, 100	92, 98	18, 20	Pretty much.	Pretty much.	....	None.	Poor.	A few hours.	Good.	None.	....
2	....	97.1, 101.1	92, 100	20, 24	Pretty much.	Much.	....	None.	Poor.	Bad.	Good.	None.	....
3	109	96.7, 101.1	102, 110	18, 20	Much.	Much.	....	None.	Poor.	....	Not very good	Local itching.	Negative.
4	....	96.5, 101.3	100, 96	18, 20	Much.	Much.	....	None.	Poor.	Good.	Good.	Itching and urticaria.	....
5	....	96.5, 101	92, 100	18, 18	Much.	Much.	....	None.	Poor.	Until 2 a.m.	....	No itching.	....
6	....	98.1, 100.9	102, 90	26, 20	Little.	Little.	....	None.	Poor.	Good.	....	....	....
7	....	98.5, 100.9	98, 104	18, 18	Much.	Much.	....	None.	Poor.	Good.	....	....	....
8	....	98.6, 101.1	94, 94	18, 20	Little.	Little.	.. .	None.	Better.	Good.	Good.	....	....
9	....	97.5, 99.7	90, 90	18, 18	Much.	Much.	....	None.	Better.	Good.	Good.	....	....
10	109	97.9, 100.8	86, 92	16, 20	Little.	Much.	....	None.	Quite good.	Good.	Good.	....	....
11	....	97.5, 100.2	84, 96	16, 18	Much.	Much.	Bacilli present.	None.	Better.	Good.	Good.	....	Negative.
12	....	97.8, 100	96, 88	18, 32	Much.	Much.	....	None.	Quite good.	Good.	Good.	....	....
13	....	98, 100	80, 100	16, 20	Much.	Much.	....	None.	Better.	Good.	Good.	....	....
14	....	97.4, 100.2	84, 100	16, 22	Much.	Much.	....	None.	Better.	Good.	Good.	....	....
15	....	97, 100.2	84, 98	16, 16	Little.	Little.	....	None.	Fair.	Good.	Good.	....	....
16	....	97, 100.2	86, 98	16, 20	Little.	Little.	....	None.	Fair.	Good.	Good.	....	....
17	110	97, 100	84, 100	18, 20	Quite a good deal.	Quite a good deal.	Positive.	None.	Fair.	Good.	Good.	....	....
18	....	97, 100.8	86, 100	20, 22	Much.	Much.	....	None.	Fair.	Good.	Good.	....	....
19	....	97, 100.2	80, 100	16, 20	Less.	Much.	....	None.	Quite good.	Good.	Good.	....	....
20	....	97, 100	86, 98	18, 19	Much.	Much.	....	None.	Good.	Good.	Good.	....	....
21	....	96, 100.2	90, 100	20, 20	Much.	Much.	....	None.	Good.	Good.	Good.	....	....
22	....	97, 100.2	90, 90	20, 26	Less.	Less.	....	None.	Good.	Good.	Good.	....	....
23	....	97, 100.6	90, 90	20, 20	Less.	Less.	Positive.	None.	Good.	Poor.	Good.	....	....
24	109½	97, 100.2	84, 98	20, 20	Much.	Much.	....	None.	Good.	Good.	Good.	....	....
25	....	97, 100	80, 76	18, 18	Not much.	Not much.	....	None.	Good.	Good.	Good.	....	....
26	....	97, 101.2	80, 100	18, 22	Much.	Much.	....	None.	Good.	Good.	Good.	....	....
27	....	98.4, 100	90, 96	18, 22	Little.	Little.	....	None.	Good.	Good.	Good.	....	....
28	....	98, 100	88, 100	18, 20	Little.	Little.	....	None.	Good.	Good.	Good.	Feels chilly after dinner.	....
29	....	98, 100.4	86, 100	18, 20	Little.	Little.	....	None.	Good.	Good.	Good.	....	....
30	108¾	96, 100.2	100, 96	22, 20	Much.	Much.	....	None.	Good.	Good.	Good.	....	....
31	....	97.2, 100.2	100, 98	20, 20	Much.	Much.	....	None.	Good.	Good.	Good.	....	....
April 1	....	97.6, 99	88, 84	18, 20	Much.	Much.	....	None.	Good.	Good.	Good.	....	....
2	....	97.6, 101	84, 100	20, 20	Much.	Much.	....	None.	Good.	Good.	Good.	....	....
3	....	98.4, 100.6	98, 104	18, 20	Much.	Much.	. ..	None.	Bad.	Good.	Cold after dinner.	....	....
4	....	98, 100	78, 100	18, 20	Much.	Much.	....	None.	Poor.	Good.	Good.	....	....
5	....	97, 99.6	94, 100	18, 18	Little.	Little.	....	None.	Poor.	Good.	Good.	....	....
6	....	97, 99.8	92, 100	18, 18	Little.	Little.	....	None.	Good.	Good.	Good.	....	....
7	....	98.4, 100	94, 84	18, 20	Little.	Little.	....	None.	Good.	Good.	Good.	....	....
8	109½	98.4, ..	100, ..	18, ..	Little.	Little.	Bacilli found.	....	Good.	....	Good.	....	Negative.

Status, April 8th, 1898.—Marked dulness over the right lung anteriorly; on left side slight supraclavicular dulness below clavicle; concussion note normal. Swollen gland over left clavicle. Right lung, posteriorly, dulness to middle of scapula. Left lung, posteriorly, percussion note normal. Sonorous moist rales all over left lung. Vesicular breathing anteriorly and posteriorly. Patient feels better and sleeps better; appetite better, cough less. On March 2nd, 1 c.cm. of the serum was injected, but on the next day the patient felt very poorly. His temperature rose to 101° F. and the injections therefore were stopped for three days. After this he received an injection regularly every day, except once when he was very weak.

Although this case did not seem to me to be one of pure bacillary infection, I must say that the serum treatment had no deleterious effect on his condition. On the contrary, the left side is freer than it was before. The right lung is unchanged, and the patient's weight remained stationary. Bacilli were present in the sputum after treatment was discontinued. As a whole his condition was perhaps somewhat improved.

Case 2. S. F., aged 21; occupation, furrier; family history, negative; previous history, always well. Eight months previously began to cough and expectorate; pain in chest; hemoptysis, nightsweats, etc. Complains at present of severe cough night and morning; free expectoration, somewhat darker than pus: nightsweats, loss of flesh; appetite is good and bowels regular.

Physical Examination, February 24th, 1898.—Chest fairly developed, but slightly retracted over clavicles; expansion diminished on both sides. Vocal fremitus slightly increased on left side. Dulness at left apex marked; slight dulness at right apex. Hard breathing over entire upper right lung, with prolonged expiration. Fine moist rales and occasional rhonchi over the middle of the right lung anteriorly. Prolonged expiration at left apex with coarse moist rales and sonorous rhonchi. Fine and medium rales left side at the bifurcation of the bronchi behind. Injections were commenced on February 24th, 1898, with serum of February 14th, afterwards with serum of February 15th.

Status, April 8th, 1898.—Dulness in left supraclavicular region marked; on right side very little dulness. Small crepitant rales left side, anteriorly, down to third rib; right side, anteriorly; breathing, normal. Slight dulness in left posterior supraclavicular region. Breathing, left lung, posteriorly, harsh, with few moist rales. The patient felt about the same as before the injections were commenced. There was an infiltration of both ventricular lips of the larynx and intra-arytenoid space. Ulceration of the left vocal lip.

This case did not run as smoothly as the first one. At the commencement of the treatment the man had laryngitis, which rapidly grew worse, and later showed distinct tubercular infiltration and ulceration. After receiving 1 c.cm. of serum, March 2nd, his

temperature rose to 102.4° F. and then to 103.3° F. From March 3rd to 7th we refrained from giving the injections. On March 8th he received ½ c.cm. but on the three following days he felt so bad that we had to stop them again, a hemorrhage having occurred during the night of March 8th. The ulcerations in his larynx then developed more rapidly and were relieved by daily insufflations of orthoform. When these were omitted the pains in the larynx returned. On March 30th an attack of syncope followed the injection but he recovered promptly. I therefore omitted the serum for three days. He lost 7½ lbs. in weight.

Case 3. P. V. G.; occupation, electrician. Family history negative. Previous history: was well up to 1890; then had bronchopneumonia and was in bed four months. His cough persisted, and after being examined he was advised to take Koch's lymph, November, 1890. In May, 1891, he went to the Adirondacks, and then to Asheville, where he gained weight up to 145 pounds. At the time of admission he coughed very little and only in the morning. Expectoration was scanty and yellowish; local sweats on neck; sleeps well 10 p.m. to 1 a.m., then slightly restless; appetite poor; bowels regular.

Physical Examination, February 24th, 1898.—Chest flattened, expansion diminished; vocal fremitus increased on left side. Slight dulness over both apices, especially the left, extending down to third rib. Harsh respiration, with prolonged expiration at left apex. In first, second and third interspaces, a little internal to the mamillary line, cavernous respiration and whispering pectoriloquy. Fine, medium moist rales at left apex. Inspiratory rales at both apices. Fine moist rales at bifurcation of the bronchi, posteriorly. Bronchial breathing in left suprascapular region.

Status, April 8th, 1898.—Dulness in left supraclavicular region; slight dulness, right supraclavicular. Slight dulness, left infraclavicular region. Harsh breathing left lung anteriorly. Small crepitant rales, second intercostal space, right lung anteriorly. Dulness, left lung posteriorly to middle of scapula. Pleuritic friction sounds, left lung posteriorly, also at base of lung in left axillary line. Cough has ceased entirely; appetite poor. Feels better.

This patient could stand the injections better than any of the others, probably because he had undergone tuberculin treatment seven years before. There was little or no reaction, his temperature seldom rising above 99° F. For some time he complained of pains in the arms, shoulders, etc., which I consider was due to the injections. His appetite as a rule was poor, but he secretly indulged greatly in whiskey. On the left side a pleurisy set in, which I purposely did not treat at all, but otherwise the condition of his lungs was improved. His weight remained about the same, and he was discharged from the Home, as he wanted to commence work.

Case 4. L. H., aged 25; occupation, tailor. A brother had died of tuberculosis. Since May, 1897, the patient had had hemoptyses

and nightsweats; had lost twenty pounds in weight. He had cough, especially in the morning, and his expectoration was scanty and white. No nightsweats; gaining in weight, good appetite; bowels regular. Both apices were retracted and expansion limited. Dulness over both apices. Tactile fremitus increased on both sides. Harsh breathing right lung anteriorly and prolonged expiration at the left apex. A few fine rales at left apex. Fine mucous rales over left bronchus, behind. Vocal resonance increased on both sides.

Status, April 12th, 1898.—Dulness supraclavicular region, left side, also slight dulness up to upper border of third rib. Dulness over upper portion of the left lung in the axillary line and dulness in the suprascapular region posteriorly. Dulness in the supraclavicular region, right side. Less marked dulness infraclavicular region down to second interspace. Slightly diminished breathing over entire anterior aspect of left lung, accompanied by numerous moist and crepitant rales. Diminished breathing, left side posteriorly with many moist rales in the suprascapular and interscapular region. Breathing diminished over entire right lung. A few crepitant rales over upper lobe. Patient's weight, 107½ pounds.

This patient could not bear the serum, and although at times I had hopes that he would become accustomed to it, he again and again showed marked reaction, lost flesh constantly (altogether 10½ pounds), and finally grew worse under the treatment. Urticaria at one time was very marked.

I report these histories not to show how good or how bad they were, but simply *how* they were. Although these results are not so gratifying as those obtained by Dr. Carl Fisch or Dr. A. M. Holmes, of Denver, nor as unfavorable as those of Dr. F. A. Waxham, of Denver, I must say that I am of the opinion that this new serum is a remedy which should be tried much more extensively. When we have a series of hundreds of cases, carefully watched and recorded, we will be better able to pass judgment on its value. Until then all well-observed cases will help to form an opinion, and in furtherance of this object this report is published.

1003 Madison Avenue.

PULMONARY TUBERCULOSIS—TREATMENT.

BY J. HUNTER, M.D., TORONTO.

Medicinal—Climatic.

"The fewer drugs the physician prescribes the better are his opportunities for understanding their characters and potentialities, and for using them skilfully." Probably there never was a time, either, when it was more needful to exercise a judicious conservatism. Our medical journals not only generously allow unbounded space for advertising merchandise "in their outer

courts," but the editors leave "the gates ajar," so that the cute manufacturers can come into the sacred precincts of these temples, and on the same altar commingle their unethical testimonials with the unblemished offerings of the guileless devotees of science; hence the precaution readers take to glance over nearly every contribution to see whether it is intended for clinical or mercenary purposes. However, most of these much-vaunted specifics meet the same fate. "They pass through successive stages of exaggerated and hasty laudation, half-hearted approbation and contemptuous neglect."

Leaving the proprietary preparations to be sifted out by the inexorable Darwinian law of "The survival of the fittest," we can very profitably direct a great deal of attention to the intelligent use of acids, alkalies, laxatives, etc., for the purpose of restoring and maintaining the functions of the digestive organs in order to secure efficient assimilation of the food. The alimentary tract requires even more consideration than the lungs. The stomach must be carefully examined, and any impairment of its functions, through dilatation, etc., should be met by massage, lavage or other appropriate treatment. The character of the stools, constipation, diarrhea and hemorrhage need proper care, and there should be also a record kept of the patient's weight.

The ferruginous compounds, quinine, hypophosphites, strychnia, arsenic, and cod liver oil are very useful in meeting special conditions, such as anemia, nervous prostration and emaciation.

Antiseptics.—Probably most of the fluids of the body, and more especially their cell contents, exercise a germicidal influence. The trend of treatment during recent years has been to maintain or augment this power by the administration of drugs popularly known as antiseptics. The most potent out of the long list are beechwood creasote (pure), in doses of five drops to thirty or upwards, and carbonate of guaiacol, five to twenty grains.

Inhalations.—A very efficient and agreeable way of using many of these antiseptic preparations is by means of inhalations. These are especially valuable when respiratory power is diminished, through imperfect muscular development, collapsed air-cells, excessive bronchial secretions, or catarrhal conditions of the upper air passage. A very important feature about some of the instruments on the market is the thermometer attachment to regulate the heat, and hard rubber mouth and nose pieces, the use of which requires more or less deep inspiratory efforts to convey the hot medicated air through to its destination. These efforts constitute a useful system of lung gymnastics. Another very important factor is that the hard rubber admits of thorough disinfection. The therapeutic effects of these inhalations are vascular stimulation, alterative action on tissues of mucous membrane, sedative influence on nervous system, and probably above all their potent germicidal powers. They exercise a very beneficial influence on the blood, since the deeper inspirations admit of a far greater absorption of oxygen,

they do not interfere with digestion, and they strongly appeal to the patient's own sentiments as to being an ideal form of treatment.

The following drugs, amongst many others, may be used: oils of eucalyptus, wintergreen, pine, and tar, the iodines, menthol, thymol, camphor, benzoin, and opiates.

Tuberculin.—The specific treatment by tuberculin, from which so much was expected and so little realized, is still in a very unsatisfactory position. Although rejected or ignored by most practitioners, it yet claims some stalwart adherents, and judging from the number of papers devoted to it at some of the most recent medical conventions, interest in it seems to be reviving. Perhaps it is within the range of hope, that ere the dawn of the new century a specific may be found that will disarm tuberculosis of its terrors.

Climatic.—The belief that certain climatic conditions exert a curative influence in tuberculosis is both so universal and so old as to challenge the most respectful consideration, however difficult it may be to find out what constitutes the basis of this faith. The ideal place has been one with perennial sunshine, balmy, salubrious breezes, enchanting scenery, a cosy home, sympathetic friends and an eminent lung doctor within easy call. Experience in this, as in many other phases of life, lays rude hands on our ideals. We know now that many tuberculous subjects endure the most inclement weather with impunity. It is within the memory of most physicians, when the only change thought of was to send consumptives south. More accurate knowledge concerning the disease and wider experience have seriously questioned the wisdom of the advice hitherto given. Are we not fully justified in following in the footsteps of the Postmaster-General in claiming far vaster realms for the cure of our tuberculous patients than have been claimed by our predecessors?

Ontario.—In our own province there is as great an abundance of benevolent influences, conducive to good health, bodily and mental vigor, and longevity, as can be found anywhere. Spring, summer and autumn are resplendent with sunshine, and the air kept pure and salubrious by occasional showers. The bright winter days, although sometimes cold, are always enervating. Within easy access we have our wooded and pine-clad uplands, long chains of lakes with their clear, placid waters encircling picturesque islands, which form ideal camping grounds for invalids or summer tourists.

Gravenhurst Sanitarium.—On one of the most beautiful islands amongst the Muskoka lakes has been erected a building of unique architectural design. Its bright sunny rooms, spacious halls and balconies are admirably adapted for the health and comfort of patients. Its location gives exposure to abundant sunshine, whilst the surrounding pine woods afford protection during stormy weather. There are a number of cosy cottages for private housekeeping.

North-West Territories.—Throughout this vast expanse of country there are almost unlimited opportunities in choice of location. The sunshine is exceptionally bright, the air dry and invigorating. The scenery and weather in spring are enchanting, the summer dry and hot, autumn and winter bright and cold.

Speaking broadly, the cases most likely to be benefited by a change of residence to northern Ontario or the North-West are those with a mild onset, slight temperature, fluctuations, localized lesions, bodily and mental vigor, and a taste for out-door life. Where such patients can enjoy camping out, they are probably under more favorable conditions for recovery in these districts than they would be anywhere else.

Sunland of the South.—Space and personal experience, as well, only permit of a reference to some of the features common to the most frequented health resorts of Colorado, New Mexico, Arizona and California. These places are nearly all dry sandy valleys or plains, surrounded by lofty mountains. The soil is naturally dry and barren, and the only vegetation is sage grass or small shrubs of various kinds. They are very highly cultivated wherever a supply of water for irrigation purposes can be obtained, and this is usually accomplished by damming up gorges in the mountains. These reservoirs are filled by the melting snow with which the highest peaks are always covered. The art of cultivation is carried to such a high degree of perfection that these resorts are a veritable paradise for artists, invalids or tourists, and each year finds an ever-swelling crowd of such visiting them.

The mountains rear their lofty heads in majestic grandeur above the fleecy clouds that cling to their rugged sides like rich drapery—the green verdure and bubbling springs of the "foothills"—the songs of the mocking-bird—the dazzling hues and fragrant perfumes of the flowers—the water rushing along the aqueducts to be distilled over grain-fields and fruit orchards, in myriads of tiny streamlets—the rarest and most luscious of fruits —orange, apple, peach, fig, olive, grape, each in its season—the broad avenues, shaded with the umbrageous palm and drooping pepper tree—boulevards ornate and fragrant with blooming roses, variegated geraniums and heliotropes—sidewalks walled off by broad, closely-clipped evergreen hedges and stately mansions or cosy cottages embowered in climbing roses: such are the environments of busy towns in which are to be found all the complex paraphrenalia that is required to meet the necessities and provide for the comforts incident to the highest civilization.

The climatic conditions vary with the height of the elevation, extent of the valley or plain, proximity to the ocean, prevailing winds, fogs, etc. Temperature variations are, especially between September and May, often very sudden and great. At 9 or 10 p.m. the thermometer may register 75° whilst at 4 or 5 a.m. it may drop to freezing point; often in mid-day the shade of a building, tree or passing clouds makes a perceptible change. The cool or

cold periods in winter are usually associated with rain or cloudiness. Rain is almost confined to the winter months. It varies in extent, from brief showers to several days' down-pour. The soil is very porous, and dries up very quickly, so that a ramble just after a shower when the air is peculiarly pure and fresh is very invigorating and enjoyable. The summers are dry, and the heat intense about mid-day. The land and ocean breezes modify the morning and evening temperature.

"*Non v'e rosa senza spina.*"—The disagreeable features are largely confined to the mid-summer season. These are—owing to the absence of rain for long periods, and the intense heat—loss of all natural verdure, parched and withered foliage, of the unirrigated trees and shrubs, dust-laden atmosphere, hot winds and blinding sand-storms. Another somewhat undesirable factor is the constant intercourse in social life with a large number of fellow-sufferers, which, on many, has a depressing effect.

The classes of patients being sent to these southern resorts are as varied as the stages of the disease. Several reasons may be assigned for the apparent absence of any effort in the selection of suitable ones, *e.g.*, in many cases the difficulty of deciding as to what would be the best climatic conditions—want of any personal experience of life in these districts, and probably the greatest factor in determining the question is the variety of climate that can be obtained within easy access of facilities for earning a livelihood. Judging from all the data accessible in a six months' practice in the south, many acute cases—where the onset had been characterized by high temperature, destruction of lung substance, hemorrhage, etc.—were saved by removing to a warm climate. The history given by some of the survivors seemed almost incredible. The acute caseous varieties—either of the lobar or broncho-pneumonic type—do better here owing to the possibility of spending the whole year in out-door tent life. The easy access to home-like comforts, competent medical attendance, supply of wholesome food, and a superabundance, in their season, of the choicest fruits and vegetables—all these combine to make the South the El Dorado, *par excellence*, for the more acute and debilitating forms of the disease. One of the incidents in southern life, never to be forgotten, was visiting the tents dotting the many little elevations, and listening to the tales of those who thought they had won or were winning a victory over a relentless foe. The annals of war present no nobler types of heroism than many of these poor emaciated consumptives do. Personally preferring death, yet with hopes of being able to help loved ones, they deem no sacrifice too great that promises any assurance of regaining health.

In conclusion, want of more knowledge and wider experience, as well as the limitations in length of such papers, must be the excuse for much that should, and could have been said, but the best use the reader can make of any contribution is to improve upon it.

PRAIRIE CHICKEN SHOOTING AT MINNEDOSA.

BY A. J. HARRINGTON, M.D., TORONTO.

VARIETY is the spice of life, and seems to be more necessary to man's enjoyment these progressive days than it has ever been heretofore. I have shot ducks at Lake Scugog, pigeons on the ridges north of Whitby, rabbits at Lefroy, partridges in Muskoka and deer in Parry Sound, and these places are to-day respectively among the best shooting grounds in our Province, with the exception of pigeon shooting, which seems to be an event of the past as far as Canada is concerned; but my companion on the trip which I am about to relate, informed me that pigeons were exceedingly plentiful in Mexico, and in 1890, I saw a large number of these birds exposed for sale in a London (Eng.) market. They are beautiful birds, and their reappearance in Canada would be a real welcome at least to me, as I was always passionately fond of this kind of shooting. Whether it is on account of having, in my youth, killed many of these birds, or whether it is that they are easily killed, I do not know. The former, I presume, is the correct reason. But I am deviating from my story.

This fall I concluded to try prairie chicken shooting in the North-West. I had heard so much about the number of these birds that could be got in a day, and as I was eager to indulge in an excess, I settled on Minnedosa as a favorable part. The accompanying photograph is an illustration of our success. It did not take long to find a suitable companion in the person of a prominent member of one of the city gun clubs—a crack shot, capital companion, and a yarn-spinner of the very first order, in style of verbosity which is altogether peculiar to himself, for to hear him once is to learn that story-telling is an art. It is a long, dreary, monotonous ride to Winnipeg and very tiresome, but the addition of a few jolly companions whom we met *en route*, tended to our relief in a great measure. Among these I must mention James Isbister, Esq., of Ottawa—"Uncle Jim," as everybody called him, and everybody knew him all along the line. He could tell a good story, and some of his quaint expressions still ring in my ears. We shall long remember him, as he is a prince of good fellows.

We left Toronto on Saturday at noon, and arrived in Winnipeg about 4 o'clock the following Monday afternoon. Here we were informed that it would be necessary for us to obtain permits to shoot. Fortunately we met an old Queen City boy, Lyman Dwight, who is Superintendent of the Great North-Western Telegraph Company here, and he secured the necessary permits for us. These, unfortunately, were limited to three days. It seems really too bad that residents of a sister province like Ontario should be

prohibited shooting privileges in Manitoba, as our game laws place no such restrictions on persons from Manitoba or the North-West shooting here, and I am certain that the number of hunters who would go there from here would be necessarily few, as the expenses are rather heavy. But I suppose we always get the least from those from whom we expect the most.

Well, we left Winnipeg Tuesday morning and arrived at our destination the same evening. We were discouraged by reports that game was very scarce, the chickens having fallen a prey to the ravages of a species of tape-worm. I failed to get any satis-

THE RESULT OF A DAY'S OUTING.

factory information of the pathological lesions caused by this parasite, but its habitat was certainly unnatural as it was found in the crop of the birds. Unfortunately this worm was not found in any of the birds that I dissected, so I give you this information as gathered from reports.

We were met here and taken under the wing of Mr. Sid Fairbairn, who is the mayor of this pretty little village of about eight or nine hundred souls, and a better hunter or companion never lived, one of those good old English offspring whom one is always pleased to meet. Poor fellow, though a martyr to pains in the small of the

back, like an old warrior he could not see our guns without having the old feelings aroused in his bosom to go along with us, which he did, and his thorough knowledge of the country and the habits of the birds were of inestimable value to us. Did you ever shoot a prairie chicken? Well, I never had, but I have shot any number of his cousins, the partridge (*Bonasa Umbellus*) in Muskoka and the Nipissing districts, and the prairie chicken is much the finer bird, being heavier, brighter colored and almost as swift of flight. There is very little difference to be noted between the male and female prairie chicken—the male being somewhat larger with small yellowish wattles. They are usually found on the shady side of the bluffs, and in their flights usually go with the wind. Early in the season they are comparatively tame and take short flights when flushed, but after the grain has been cut and they have been shot at frequently, they fly much farther—sometimes a mile or two—and are then very hard to mark down.

We secured a double-seated waggon at the livery stable adjoining the hotel, and about half-past eight Wednesday morning, we started out, and after about an hour's drive we sighted our first bird flying across the road in front of us. Almost at the same moment our driver, who, by the way, had an unusually sharp eye for game, as he proved on several occasions during the day, espied six or seven birds on a small poplar tree to our left. We were quite eager to get our first shot, but we were incautious and the birds were not stupid enough to allow us to get within range, but flew away in the direction of some wheat stacks which we could see about a mile off. Old Sid assured us that we would come up to them, and we again got into the rig and drove on. When we came near enough to the stack we could see several of the birds on the top of different ones, so again alighting we stealthily approached, this time observing more caution than on the previous occasion. How large those birds looked! Was it an atmospheric effect or was I partially mesmerized, for the birds seemed to vanish as if by magic. But three shots rang out and three birds came to grief, one killed by Sid and two by my left-handed companion, who turned to me saying, "What is the matter? Why did you not shoot?" I replied I did not know, but supposed they were too quick for me. While we were talking, another bird, which had evidently been hiding and thinking to find us napping, came by like a rocket. My sinistro-dextrous friend raised his gun, and at fully eighty yards brought it to *terra firma*. Four birds, and yet I had not fired a single shot, but my chance was to come. We had not started our dogs yet, but we now put them out and advanced about thirty yards apart towards a bluff or clump of trees—George on the right with the dogs, Sid in the centre, and I on the extreme left. These bluffs are not literally bluffs, but are small collections of poplar or scrub oak scattered here and there over the undulating prairies, and afford shelter to the chickens and relief to the eye when travelling over this character of prairie country—so called

from an event which occurred in the midst of one of these copses when a party of four were playing a "quiet little game" there.

When we had got within easy range of this bluff a chicken arose on my left and went diagonally away. This is my most difficult shot and always has been, but this time I was equal to the occasion, and he went to grass. My first shot—my first bird. Now I was in the hunt. Following up the covey we had an excellent morning's shoot, the shooting being fairly evenly divided, with results slightly in George's favor, and at mid-day we lunched by the side of a small lake where we saw numerous ducks, but they were very wild, and we only got five or six of them, all shot at long range. About four o'clock we arrived at the best point in our day's outing—a large wheat field with part of the grain in stooks and part still uncut. Here some remarkably fine shooting was made—shooting that the novice never makes, and which makes an adept feel a pleasure which nothing else can equal and only an enthusiast appreciate. Two of these performances are worthy of mention. When about half way across the field two birds got up, one in front of the other, on the right side of Sid. The one which rose in front flew straight away, the one on the right flew backwards in the opposite direction. He killed the first with the right barrel, and wheeling around he killed the second with his left. I was on his extreme left and naturally walked towards him, when at about forty yards' rise up got another bird, which flew straight away. I fired, and the bird flew along as if nothing had happened, but fell dead about four hundred yards off. These three birds on examination were found not to be chickens, but a species of grouse which had got farther north than they are usually found. Sid said they were Minnesota grouse. They are beautiful birds, nearly as large as chickens. They fly very swiftly, and are said to be very destructive to the prairie chickens, having almost exterminated them in some localities. "Survival of the fittest" The second exhibition of fancy shooting was made by my companion. A chicken had alighted on a stook at the opposite side of the field, and he started out to get it. He had just got within range when we called his attention to another bird which was flying directly towards him. At this instant the sitting bird rose and flew towards the flying bird at an angle which would bring the birds in their flight across one another's course. But fate never permitted this, as both birds were suddenly stopped in their progress by coming in contact with some number four shot from either barrels of his Greener. This was an excellent double shot, and an exclamation of praise from both Sid and myself must have been very flattering to his Avoirdupoisship.

You will notice I have said very little about our dogs. Well, they were not very reliable, as they were young and unsteady, and would rush in occasionally and spoil our chances, so we thus lost a good many birds which we would have otherwise obtained. We returned home that evening with our carriage well stocked

with birds, which made even the judge look on us with admiration when he beheld them.

Our hosts, Ray and McLellan, of the Grand Central, seemed to know just what was requisite for tired and hungry sportsmen, and we can most heartily recommend their hostlery to anyone who chances in that neighborhood. Thus concluded the best day's shooting I ever had, and I hope to again visit this place and renew my pleasant experience.

APPLICABILITY OF TESLA'S SYSTEM OF MOLECULAR EXERCISE TO THE CURE OF DISEASE.

BY ALBERT S. ASHMEAD, M.D., NEW YORK.

X., BORN and reared in the Mississippi swamps of Louisiana, has all the appearance of the Louisiana swamp doctor. He is tan-skinned, evidently has been repeatedly a prey to malarial fever: his liver may be pigmented. His lanky stature is crowned with an enormous, overlapping sombrero; not addicted to Robertson County or Bourbon. He is fifty, or a little more. He is a cotton-planter by trade, making frequent trips to New Orleans or Memphis; but if his actions are cottonous, his innermost thoughts are electrical. He is one of the many who have fallen helplessly under the charm of electricity. He is the last (so far) heir and representative of a long line of people who, trying to transmute the vile metal into gold, have discovered and invented an enormous proportion of this splendid civilization—the alchemists. He is convinced of that.

Universal laws, says he, in their action of cause and effect are merely a system of *miniature* atomic vibrations (think of the smallness of a vibration, which being atomic, is further reduced to miniatureness; we are at the very doorstep of nothingness!); there is only one substance (in existence, he says; and cunningly adds, or out of existence. Vous comprenez!); this substance we will call zero. The atoms of zero are at absolute rest, and offer no resistance to what I call matter. All matter is composed of zero atoms, which have been started in action and motion. Iron and cotton are the same substance, but the zero atoms which form them vibrate with different velocity. He, most judiciously, thinks that the greater velocity must be on the side of the cotton, because —well, for obvious reasons! But let us not run away with the idea that things are of this excessive and unnatural simplicity. The difference in the way in which things appear to our senses, results from another cause also: direction of the vibrations. Hickory wood atoms vibrate at a speed of 100,000 cycles per second. We know so much; but we must not forget that the

direction of the movement, at a given moment, is perpendicular. Oak wood, on the other hand, possesses a speed of 99,000 cycles per second, but the direction at a given moment is horizontal. He applies this atomic zero, cycles and direction and all, to everything that falls under his observation, and, *mirabile dictu*, to the cure of diseases.

Leprosy, for instance, is caused by an abnormal speed, or a nocuous direction of the atoms. How simple! Of course, he himself sagely remarks, the bacterial nature of the disease does not prevent the application of his theory: which enigmatical sentence means probably that he has no belief at all in the bacterium, considering that this abominable vegetable is itself a subject to atomic vibrations, and to all the vicissitudes of speed and direction.

The incurability of a disease means the impossibility to bring back the abnormal speed or direction to the normal. Electricity is his panacea. It fails so often to give the hoped-for results, because we cannot make it reach the diseased parts; we could not do that without killing the patient by the strength of the current. The Wheatstone bridge shows that electricity only travels the nerves and fibres of a body until it reaches the blood, which is by far the best conductor. The current after reaching the blood follows only the large streams. This accounts for the fact that the shock is felt only at the points of contact; the large streams of blood, being nerveless, do not indicate the passage of the electricity far into the body. Any disease germs which are in the blood through which the current passes, are probably killed, which accounts for the fact that, in some diseases electricity, in one form or another, helps the cure. Now, if in these cases the small quantity and surface that the current reaches helps the cure, what would be the result if every atom of the body could be charged with a current varying from the very weakest perceptible waves to the highest amount the body could stand and maintain life? We will go further. Suppose instead of generating a current outside and sending it through the patient, we generate the electricity in the patient himself. What then? But we will go still further. Suppose we not only charge the subject with electricity, but we make a veritable magnetic field of him. This is neither fatal nor painful, however strong, and there is absolutely no insulation against it. It will pass through the bones with equal decision as through flesh and blood. This, then, is the method.

A transformer, that is, simply a large induction coil, sometimes called a converter, such as is used in electric light or power work for changing high-tension currents into low-tension currents, and *vice versa*, is necessary. This converter is as much a generator as the dynamo itself. The current which is delivered to it is not transformed, but only furnishes the power for generating a secondary current of required voltage. Now, he proposes to build a transformer of sufficient size and suitable shape for the purpose, and wind the primary coil as usual with wire, but on the other side

have a human body form the current instead of a copper coil. In this alternating magnetic field the body of the patient will rest, sleep if desirable, while every atom of his body is cutting magnetic lines of force, and consequently across every atom will be flowing a current of electricity.

By this method you have an unlimited field in which to vary the speed of the magnetic vibrations. In fact, the idea is to find by experiment what the normal speed of the prime atoms in a patient is; then produce frequency in the magnetic field of the same speed, thus controlling them, and restoring normal conditions, which might manifest itself in the death of microbes or otherwise. I have been encouraged, he says, to offer this idea by the publication of Tesla's system of molecular exercise. I think he claims to shake up the molecules of the human body with good results by means of extremely high frequency currents. But in this he will have the same trouble as is encountered by the old methods. By the transformer method every fibre of the body becomes a generator and conductor of an equal ratio of current.

Mud as a Health Food!

According to the *St. Louis Clinique* for January, it is a fact that a charlatan "professor" gave a lecture recently in Denver in which he delivered himself as follows:

"And now I am going to make known the greatest discovery ever made by mortal; everyone hold fast to his chair and keep calm." A wave of expectancy swept over the vast audience and, amid a death-like silence, the professor continued: "In my stupendous investigations of animal life I have discovered that dogs, horses, pigs, etc., were not troubled with dyspepsia, rheumatism, consumption, appendicitis, hysteria and other ailments. I observed that all animals were very much given to eating dirt; this suggested the thought, why not do likewise? and under the inspiration of the idea I commenced to eat dirt, and have been doing so ever since, with the result that my physical ailments have departed and I stand before you to-night the most healthy man in America. I guarantee, if any individual will take three doses of dirt a day, it will cure every disease that is known to the medical profession. There is only one brand of dirt, however, that I can safely recommend, and it comes from the banks of the dear old Missouri River. Anticipating a large demand for it, I took the precaution of having a large consignment shipped to Denver. I have had this great Nature's remedy put up in neat boxes which will be sold at popular prices. Special rates will be made to large families and public institutions on keg and barrel lots. I will guarantee that it is the quintessence of the banks of the Missouri River."

The writer states that there were fools enough in the audience to enable the "professor" to exchange a large quantity of his Missouri realty for hard-earned dollars.

Surgery.

IN CHARGE OF . . .
BRUCE L. RIORDAN, M.D., C.M.,
AND F. N. G. STARR, M.B.

SUB-PHRENIC ABSCESS.

At a meeting of the Birmingham and Midland Counties Branch of the British Medical Association, Dr. Short showed the stomach from a case of sub-phrenic abscess following perforation of the viscus. The patient was a girl, aged 16, who was first seen on August 17th, fourteen days after being taken with severe pain in the region of the stomach with vomiting. She had previously suffered from dyspepsia and pain after food for twelve months, but had never vomited blood. The physical signs pointed to air and fluid beneath the diaphragm. On draining the cavity through the ninth space in the posterior axillary line fetid pus was evacuated. She did very well for some three months, but the temperature was never satisfactory. At the end of this time she suddenly developed acute pleuro-pneumonia up the right side and died in a few days. At the autopsy some curdy pus was found in the crevices between the stomach, liver, and diaphragm; otherwise the abscess cavity was healed and the ulcer closed by firm adhesions to the spleen.—*Birmingham Medical Review.* F. N. G. S.

AN UNUSUAL INJURY TO THE KIDNEY.

At the annual meeting of the Medical Society of the State of New York, Dr. W. D. Garlock, of Little Falls, presented this clinical report. "The patient, a lad who had received a severe blow during a game of base-ball, had presented no very definite signs or symptoms until the following day, at which time there had been bloody urine, tympanites, abdominal tenderness and dulness over the left kidney. On abdominal section, Dr. J. J. Kilbourne, of Utica, had found a large sub-peritoneal hematoma of the left kidney, and had then cut down upon the kidney through a posterior incision. The kidney having been found severely lacerated, it was extirpated, but the patient had never regained consciousness after the operation."—*Medical Review of Reviews.* In the writer's experience the evidences of rupture of the kidney have supervened more rapidly. The pain and signs of collapse were the first to appear. Then there was tenderness on pressure with dulness on percussion in the renal region, followed by bloody urine. The symptoms gradually subsided and recovery took place in two cases without operative interference. F. N. G. S.

A NEW METHOD OF APPLYING A PLASTER-OF-PARIS SPLINT TO AN ANKYLOSED KNEE-JOINT.

Dr. H. M. Hall, of Butte, Mont., describes a new method of applying a plaster-of-Paris splint to an ankylosed knee-joint. The patient, having been anesthetized, is drawn down until the buttocks reach the edge of the table, and the heel of the affected limb is placed on pillows on an adjoining table. This leaves a space between the two tables in which the operator can work. After the limb has been extended by manipulation, it is kept in a position of complete extension by the following method: A strip of cheese-cloth or common domestic cloth, one foot wide and two feet long, is cut or torn into a many-tailed bandage—four, six, eight, or ten tails, as may be required. The tails are cut or torn to within two inches of the centre, the long way of the bandage. The joint having been well padded with cotton batting, weights such as sad-irons are tied to each strand, when the bandage with the weights attached is put astride the joint: sufficient weight should be applied fully to extend the limb.

The plaster-of-Paris is applied in the following manner: Commencing low down on the foot or leg, as may be required, as when there is tense contraction in the hamstring tendons, the bandage is carried from the foot up the limb. When the many-tailed bandage and weights is reached the plaster-of-Paris bandage is passed in and out between the strands and is continued up the thigh the required distance. As the bandaging progresses, the strands of the many-tailed bandage at the knee-joint are pressed by the plaster-of-Paris bandage into small round cords. After sufficient plaster-of-Paris bandage has been applied the limb is allowed to rest in the fully extended position with the heel on the pillows until the plaster has set, which is usually in twenty or thirty minutes. The tails sustaining the weights are then cut off close to the now firmly hardened plaster splint, when it will be found that the ends have retracted within the plaster cast, leaving small holes corresponding to the number of strands. These holes are useful in ventilating the joint, and do not impair the strength of the cast at all.—*Medical Record.* F. N. G. S.

The Highest Causes of Mortality in the City of Mexico.

According to the *Boletin del Consejo superior de Salubridad* for December, 1898, out of 1,313 deaths occurring in the city of Mexico in the month of November, 125 are credited to tuberculous affections, 105 to acute bronchitis, 117 to pneumonia, and 242 to diarrhea and enteritis. These are the only specified causes that reach triple figures, the next highest being gastro-enteritis, the stated cause of death in 61 cases.

Gynecology and Obstetrics.

. . . IN CHARGE OF . . .

GEO. T. McKEOUGH, M.D., M.R.C.S.(Eng.), AND J. H. LOWE, M.D.

THE RELATION OF DISEASE OF THE FEMALE GENERATIVE ORGANS TO NERVOUS AND MENTAL AFFECTIONS.

DR. B. SHERWOOD-DUNN (*Annals of Gynecology and Pediatrics*, January, 1899) gives an exhaustive communication upon this subject which is attracting considerable attention at present, and in it gives the medical history of a celebrated case (Mrs. C.) of kleptomania which occupied the public newspapers at the time. The case is one of mental or rather moral disorder in a hysterical woman, the subject of chronic uterine and rectal disease. It is of some interest also from the standpoint of medical jurisprudence, as the unfortunate patient was proceeded against legally in England, and having by advice of counsel submitted a plea of guilty of larceny, received a severe sentence of imprisonment, being liberated, however, through the interference of the Home Secretary upon the medical testimony submitted.

Upon Mrs. C.'s liberation, husband and wife sailed for home, and before proceeding to the western city in which they reside, came to Philadelphia for the purpose of consulting Dr. Steinbach, who saw the patient for the first time on November 29th, two days after she had landed from England. He found that the uterus was hypertrophied to one and a half times its normal size; the mucous membrane was irregularly roughened and bled on the slightest touch by the sound. The cervix had a bilateral laceration more extensive on the left side. The tear was well cicatrized. The rectum was found to be fissured below, ulcerated above. There was evidences of former ulcers that had cicatrized, and several larger turgescent arterio-venous varicosities (hemorrhoids) which bled freely. Dr. Steinbach advised removal of the patient to the Polyclinic Hospital, where after preparatory treatment for a few days the patient was anesthetized with ether, the spincter ani dilated, the fissures cauterized with a Paquelin thermo-cautery, the ulcers treated likewise and the hemorrhoids clamped and cauterized. The uterus was curetted and trachelorrhaphy performed by denudation of the cicatricial tissue and suturing with silkworm gut. The patient, subsequent to the operation, complained of discomfort to a greater extent than is usual with those undergoing similar treatment. The temperature remained normal throughout convalescence

Before operation and subsequently, upon various examinations by Drs. Weir Mitchell and Solis-Cohen in consultation with Dr. Steinbach, a history was gradually obtained substantially and succinctly as follows:

The patient is thirty-four years of age and has been married eleven years. She has had one child ten years old, and no other pregnancy. During pregnancy she suffered much from hemorrhoids, and was operated upon, and since then has been subject to prolapse of the rectum, at times causing much distress.

Previous to fifteen months ago she had suffered little from dysmenorrhea. The menstrual flow was excessive, but otherwise normal. She had never been accustomed to rest during menstruation, although she would often faint on going into a hot room or being excited at this time. About fifteen months ago, following a wetting during menstruation, the flow ceased, and the patient was confined to her bed for some days with headaches and feverish symptoms. Since then there has been no real menstrual flow; there was more or less offensive discharge at irregular times, and after two or three months a slight wetting of the diaper at what should have been the menstrual period. For some days preceding this there was considerable pain in the back and abdomen, the patient showed great nervous irritability and excitement, and the tendency to headache and to fainting became exaggerated. The patient was at times subject to palpitation of the heart.

Inquiry into the patient's mode of life showed she had been "ever on the go," her day being one of excitement rather than mental occupation. She had always been fond of social pleasures and of shopping, but her husband, though by no means so wealthy as report declares, has been fully able to gratify her in these respects without any necessity for her to resort to larceny.

In person Mrs. C. is of medium height, somewhat fleshy but of good form, the skin is fair and smooth, the muscles well developed though somewhat flabby. The cheeks are constantly flushed, the left face is moved less than the right, this difference being easily observed; the eyes are roving and restless. In London (the husband states) she heard voices and would go to the door to listen. Later these were heard at night. She was born with some foot trouble, walked at five years and wore irons.

Dr. Solis-Cohen found no disease of the heart or lungs although the second sound of the heart was somewhat accentuated, and the patient exhibited familiar signs of vasomotor instability. Digestion was normal. Nothing pathologic was detected by either of us in the urine. At our request Dr. D. D. Stewart also carefully examined the urine, with the result of finding it practically a typically normal fluid, the quantity which had been scanty just after the operation having increased at the time of our examination to 1,200 cubic centimetres in twenty-four hours during rest.

Concerning the offence for which the patient was prosecuted in England, it is unnecessary to enter into details further than to say,

through sending to a shop to be matched an article which had been abstracted from that very place, and to which the price-mark remained attached, suspicion was aroused, and various articles, some of value, some of no value, and many for which she could have no possible use (including a toasting iron, some common towels, and plated spoons marked with the name of a hotel on the continent), were found in the patient's trunk. She was, therefore, arrested, and brought to trial, with the result stated.

The husband consulted Dr. G. H. Savage, Dr. M. L. Gabriel and Dr. W. C. Grigg, who united in the opinion that she was mentally and morally irresponsible for the offence, and that the exciting cause of her mental unbalancing was uterine disease with aggravation from the condition of the rectum. Dr. Savage concludes his opinion by saying: "I am used to seeing cases of so-called kleptomania. They are not uncommon among people, more particularly women, belonging to the upper and middle classes. *They are commonly met with in women who have some uterine trouble, which might lead to hysteria or allied nervous troubles.* The characteristics of the disorders are chiefly seen in the unreasonable nature of the acts, things of various value and interest being taken, and the risk of detection run being out of all proportion to the value of the goods taken. I do not think Mrs. C. had reasonable knowledge of the acts of which she was accused, and I believe she would suffer seriously from detention in a prison or asylum. She is of the class to which kleptomaniacs belong, and one must not expect to find other signs of insanity in her."

Dr. Gabriel testified that he had seen the patient some six months previously, shortly after her arrival in England; that she was then suffering from frequent attacks of headache and irregularity and scantiness of the menstrual flow; that she was extremely neurotic, and that he had then advised rest and freedom from excitement.

Dr. Grigg's opinion was substantially the same as those quoted above. He likewise says: "I should mention that on the 3rd of November, when I last saw Mrs. C., her monthly period had commenced. This would point to the fact that, at the time she took the articles charged in the indictments, she must have been going through her monthly period, at which time her illness would be most likely to cause mental disturbance." In a letter to Dr. Steinbach, he describes the uterine conditions as follows: "The fundus is extremely tender; by conjoint examination, the cervix and body as far as one can reach, under these circumstances, very hard (a tear on the left side of the os), indicating to my mind some previous inflammation of these organs.

"The uterine sound passes four and a quarter inches, the fundus of the uterus is irregular, and in some parts rough and nodular. It is very sensitive to the touch, producing considerable pain, which continues for many hours. There is a slight hemorrhage, although great care was taken in making the exploration. She has also a

constant offensive discharge. She will inform you that for the last twelve months, in consequence of severe wetting during menstruation, she has had a very slight loss at these times. I saw the diapers and verify the truth of these statements. As she could not remain in England for treatment, I have advised Mr. C. to consult you."

In his testimony submitted to the Home Secretary, he adds: "She is intensely neurotic. *The condition of things—a disease of the upper portion of the uterus—is a very common accompaniment of various forms of mania in women, such as melancholia, religious mania, nymphomania, and I have seen it in several cases of kleptomania.* It is invariably coupled with much mental disturbance. The condition I discovered is quite sufficient to account for any form of mental vagaries which are so well known to affect a certain class of women (neurotic) with disordered menstruation. Her bowel condition would aggravate this."

In explanation of the plea of guilty entered at the trial in England, Mr. C. stated that it was by advice of counsel, as a successful defence under the plea of kleptomania would have necessitated the immediate commitment of his wife to an asylum for the insane, and the physicians whom he consulted were of the opinion that this would tend to aggravate rather than relieve her mental disorders.

The facts thus given are sufficient to show the main points upon which Dr. Mitchell has based his analysis of the mental phenomena in this case, with which, it is almost superfluous to state, we are almost in complete concurrence. The following extracts are taken from Dr. Mitchell's opinion:

"January 20th, 1897.—I have carefully examined Mrs. C., and have considered the papers which bear upon her case. I have also had a long talk with her, her husband, with the physician and surgeon who have had her in more immediate charge, and I have read the report of the English experts; also, I have had the advantage to read the newspaper cuttings, giving the details of the trial, and I have read the Home Secretary's order for her release.

"It is clear to me that Mrs. C. has, for some time, been in the habit of taking objects of no use and of little or great value. It is known that for these thefts there was no excuse, as she has been reasonably supplied with money for a person in her condition of life.

"I do not believe that Mrs. C. had any clear notion of the nature of her acts, or of their consequence, and I am of the opinion that very positive and long-neglected uterine and rectal disease had much to do with the disorder of mind from which she has suffered, and which is apt to be associated with hysterical conditions.

"Had I been in England at the time of trial, I should not have agreed with the lawyer as to her plea. In my opinion she should have pleaded insanity, accepted the commitment to an insane asylum for two or three months, and been released therefrom. She is now under a stigma from which it will be difficult to escape, that of having pleaded guilty.

"This involves long explanations: the plea of insanity would have involved none.

"I think her hysterical, weak and unbalanced, but no criminal. It is a characteristic of her form of mental disorder that she should show no other obvious signs of insanity than the overwhelming tendency which belongs to her form of monomania."

The surgical treatment of the case has already been described. The medical treatment consisted simply in rest, nourishment and massage.

The menses appeared on December 10th, and ceased four days later: reappearing in due time, and again lasting four days. The flow seemed normal in character and quantity. The patient had left the hospital on December 28th, and the course of treatment above outlined was then continued for some three weeks at the home of her sister.

On January 25th, she left Philadelphia for her home, apparently perfectly recovered physically, and with these symptoms of mental improvement that, whereas when first seen she seemed rather to enjoy the excitement of the doctors' visits and questioning, *pari passu* with her physical improvement there seemed to develop abashment if not shame; and contrition for the acts was added to the regret for the trouble brought upon her husband, which had previously seemed to be her only cause of grief.

Here is a case which, because of the prominence of the English physicians who had examined and rendered an opinion in it, and because of the unusual publicity and wide-spread interest taken in it by the public, we may reasonably suppose was approached with more than ordinary care and circumspection by the prominent medical men called in Philadelphia, one of whom we recognize as a man of unusual ability, well known in the world of letters as well as a leader, if not a leading mind, in his specialty of neurology. All three of the English physicians consulted will be recognized as authorities in their special departments of medicine, and they united in a sworn statement to the English Home Secretary that her mental irresponsibility was directly due to uterine disease, in which opinion the American authorities mentioned agreed.

The language used by Drs. G. H. Savage and W. C. Grigg is particularly important regarding the relation of pelvic disease to nervous and mental disorders, and is based upon a wide and varied professional experience. I look upon this case and the testimony it has brought out from the medical attendants as having the greatest value in support of the position that disease of the female generative organs is often the direct cause of nervous and mental affections.

THE (English) *Practitioner* has now appeared in a new and enlarged form.

Ophthalmology and Otology.

. . . IN CHARGE OF . . .

JAMES M. MacCALLUM, M.D.

WHAT TO DO AND NOT TO DO IN THE TREATMENT OF CERTAIN OF THE MOST FREQUENT EAR AFFECTIONS.

BY PRIVATDOCENT DR. HAUG,
Director of the Ear Department of the Royal University Polyclinic, Munich.

As to the air douche itself there is no doubt that in it, whether carried out by the simple valsalva procedure, by Politzer's method or by the catheter, we have one of the mightiest means of improving and curing a large portion of the defects of the hearing apparatus which depend upon a disturbance of the middle ear. On account of their easy accomplishment, Valsalva's and Politzer's procedures have become the property of the laity. While capable of the greatest good, still if used at the wrong time and place, the air douche can cause endless injury.

Not long since it was the fashion on the part of the practitioner to "air douche" every variety of ear disease, and the patient soon learned to treat himself by Valsalva's and Politzer's method.

In this connection two questions arise:

1. Can the air douche under certain circumstances work injury?
2. When can and ought we to apply the air douche for the relief of existent affections of the hearing?

The first question must be answered with yes. In accord with physical laws and following the path of least resistance, whenever air is compressed in the naso-pharynx it extends through the eustachian tubes into the middle ear. Unfortunately, not air alone, but at the same time a portion of the contents of naso-pharynx, mucus, secretions and accidental dirt is carried along.

Many of the micro-organisms found in the normal oro-naso-pharynx are the most exquisite provokers of infectious disease, and may be carried along the same path and set up an inflammation, especially when the nasal mucus has lost its bactericidal properties, from pathological processes. This latter condition is necessary, otherwise in spite of the pathogenic organisms no disease will occur. The largest portion of the acute inflammations of the ear occur by the way of tubal infection; infection of the blood stream, as well as infection from without through the external meatus, are far less frequent: "an ounce of prevention is worth a pound of

cure." Having established the fact that infection of the ear can readily occur from the naso-pharynx by continuity or contiguity, we should direct all our efforts to prevent this eventuality.

Therefore, it is our task to warn our patients against voluntary air condensation in every acute catarrh, every angina, whether exclusively local or the expression of a general infection.

Therefore, caution in and during blowing of the nose. Never blow the nose with closed mouth or both nostrils closed. Von Tröltsch advises the countryman's method. I now come to the proper consideration of the therapeutic employment or non-employment of the air douche. And first the *acute middle ear inflammations*. These processes are associated with more or less marked reduction of hearing power, and since we know that such disturbances are often relatively easily improved by the air douche, its employment follows quite logically. This was formerly the custom of almost all ear doctors and is still to some extent. May the air douche be employed in the acute catarrhal or acute purulent middle ear inflammations? No, repeatedly no. The commonest general surgical principle contra-indicates this procedure; "every inflamed organ should have rest."

In the air douche the current must *force* its way into the middle ear spaces, which are inflamed and perhaps already covered with secretion, in order to reach the drum membrane and set it in (sudden) vibration. Patients avoid of themselves every inflation of the middle ear, as in blowing the nose, because it is painful, and thus instinctively protect themselves against injury. Still on the medical side, the air douche is used frequently, without reference to this fact, for relief of the concomitant deafness, and that even before spontaneous rupture of the drum membrane.

What is the result of this? At least an exacerbation of the pain from the moment of the inflation: often enough boring pain in the mastoid region, swelling behind the ear, empyema of the mastoid, and trepanning of the mastoid cells.

It is now absolutely clear to me that to use the air douche in the acute stage with an unperforated drum membrane is very dangerous.

I, therefore, omit it in *all* acute middle ear processes, not only when unperforated, but even when the drum membrane has already ruptured spontaneously; the latter, because I have too frequently seen, despite the presence of the usually small opening and the possibility of a relative equalization of air pressure, in immediate conjunction with the air douche, renewed ear ache and inflammatory manifestations in the mastoid set in, which were not previously present.

Since I no longer employ the air douche in the acute stage, the results of my treatment are much better: not that I absolutely forbid the air douche in the course of the treatment of acute media, but it is first employed ten to twelve days after the onset or even later, at a time when the patient suffers not even a trace of

pain upon air condensation. It then acts as it should act, and contributes eminently toward the restoration of the affected ear *ad integrum* in the shortest space of time.

It is naturally a matter of individuality when inflation may first be undertaken without injury. In one case we may perhaps apply it cautiously upon the fifth or sixth day, if upon trying a gentle Valsalva the patient experiences absolutely no painful sensation, while in other cases the possibility may first occur in the course of the third or fourth week. As a rule, we should not delay longer than this in the application of the air douche, because otherwise there is a possibility of the formation of adhesions, pseudo-ligaments and other similar products of the exudative inflammation, whose disappearance is then very difficult or impossible to accomplish. Apart from the possibility of danger, the air douche is completely useless and illusory in most cases of acute perforative media, at least at the stage of maximum intensity. The evacuating effect of the air current is merely transitory; in a short time, often under the eye of the examiner, new secretion has occurred in the place of the old, emanating from the niches and folds of the middle ear spaces, and the patient, having heard better for a moment, again hears just as badly as before. The air douche has a real evacuating effect only when the secretion has begun to lessen in quantity, and not before. This is usually synchronous with the disappearance of pain. Why is the air douche injurious in acute exudative middle ear inflammation, especially as long as there is no perforation of the drum membrane?

Not only because the naso-pharyngeal contents mingled with pathogenic material may possibly be forced into the tympanum, but because pus and exudation, up to now confined to the lower portion of the tympanum, may be forced by the current partly into the upper drum cavity, partly through the aditus ad antrum into that cavity and thence throughout the cellular system. Or the exudation may be pressed still further on into the osseous spaces, even through persistent openings in the tegmen tympani (a not uncommon abnormality) directly against the dura mater, making it bulge toward the interior of the skull, and forcing the pus into its meshes and into the lymph or venous channels. The danger of such occurrence is greater on account of the pressure offered by the resistance of an unperforated drum membrane, and it may happen even after spontaneous rupture of the same. We have, then, the pus which envelope the entire tympanum exerting a direct pressure upon the interior of the cranium, while at the same time the intra-cranial pressure is at its maximum.

Shall we now in such a case convert this existing pressure by a momentary increase into an excessive and absolutely injurious pressure? No, under no circumstances, else we violate our first law "primum nil nocere."

The lesson for the general practitioner who treats acute exudative middle ear processes is that *every kind of air condensation*,

voluntary or therapeutic, *must be strictly avoided* at the time of an acute exudation in the middle ear. In subacute and chronic middle ear processes the air douche alone, or in conjunction with other methods, again enters the foreground of treatment. Here it acts for the relief of tension—anomalies of the drum membrane and ossicles, as well as remains of exudates that may be present; tinnitus aurium also may be favorably influenced; it is universally of no use in labyrinthine affections, either alone or in combination with middle ear affections. Here condensation from within often does harm.

With a large number of physicians, on account of its convenience, a certain routine has been developed in accordance with which, whenever the ear runs, whether the secretion comes from the meatus or the tympanum, syringing with antiseptic solutions, followed by the insufflation of powdered antiseptics, is carried out.

No doubt a proper powder treatment, introduced at the right time and place, can accomplish extraordinarily favorable results, but it must not be employed at random.

The proper domain of the powder treatment, whether borax, iodoform, zinc sozoiodalate, alumnol, nosophen, chinosol, airol, Europhen, or any other of the innumerable iodoform substitutes, is otitis media *chronica* suppurativa.

Here we obtain the best results with boric acid, and in cases of relatively large loss of substance or good-sized perforations situated low down.

As unsuitable for the powder treatment must be regarded those cases in which the perforation is situated in the upper half of the membrane, or is very small.

In all such high-lying and small perforations, backing up of the secretion readily occurs, with all of the symptoms of retention —pain, fever and meningeal irritation, etc. These cases, on account of their severe and often dangerous complications, are not adapted to treatment at the hands of the general practitioner.

There remains for our consideration the application of this method in the treatment of otitis media suppurativa *acuta*.

Here powder treatment should be but rarely applied, and especially never during the earliest period after rupture, because the spontaneous opening tends without exception to be small, and despite a primarily favorable location of the orifice can readily give rise to manifestations of retention.

Thus by early powder insufflations mastoid complications are greatly favored.

A simple acute perforative media will usually heal in three weeks, with restitution *ad integrum*, under a strict dry treatment —*i. e.*, the introduction of dry strips of gauze without irrigation of any kind.

When the acute suppuration begins to pass into the subacute, with a perforation sufficiently large and located below, and under a relative guarantee from the nature of the secretion that the powder will be dissolved, the powder treatment may be introduced.

In all cases, whether a powder be applied in a chronic or subacute middle ear inflammation, never should the medicament be blown *en masse* upon the diseased mucous membrane, but only lightly applied in the form of a thin veil.

Should this not be done, it can only too easily come to renewed manifestations of retention. On this account insufflation of powders should never be entrusted to patients as a method of self-treatment.—*Journal of Eye, Ear and Throat Diseases.* J. M. M.

Sanitation in Havana.

The colossal task of establishing proper sanitary conditions in Havana is being energetically carried out under the supervision of Surgeon-Major Davis, of the United States army. A hundred resident medical men have been engaged to make a house-to-house inspection throughout the city, and to compel obedience to the new regulations. It is expected that the city will be in a fairly good sanitary condition by the end of March, but without underground sewerage. Over a thousand men are engaged in the work of cleaning the streets and public buildings.—*The Med. and Surg. Review of Reviews.*

The X-Rays at Omdurman.

In a recent paper read before the Rontgen Society, Surgeon-Major Battersby related his experiences in the use of X-rays in the last Soudan campaign. After the battle of Omdurman 121 British wounded were taken to the base hospital. In twenty-one cases the bullet could not be found, and in twenty of these cases an accurate diagnosis was obtained by the use of the rays. The electric current was obtained from E.P.S. cells charged by a hand dynamo, and much ingenuity was displayed in utilizing the back wheel of a tandem bicycle, stripped of its tire and geared to the dynamo, for driving power.—*The Med. and Surg. Review of Reviews.*

Inspection of Dwelling-Houses in Consumption Cases.

The New York Board of Health has assigned a number of inspectors to examine every dwelling-house in the city in which there have been three or more cases of consumption since January 1st, 1897, and they have been instructed to obtain a list of all structures considered to be infected with the germs of tuberculosis. Whenever a case of death from consumption is reported, an inspector from the Board of Health calls and compels the owner to wash the walls and ceilings, if they are kalsomined or painted, with a solution of washing soda and hot water. If the walls and ceilings are papered, the paper is removed, the walls are washed with the solution, and fresh paper is put on. All the woodwork, including the flooring, must be washed and re-painted.—*The Med. and Surg. Review of Reviews.*

REPORT OF DEATHS FROM CONTAGIOUS DISEASES IN ONTARIO FOR THE MONTHS OF DECEMBER, 1898, AND JANUARY, 1899.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

DECEMBER, 1898.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Scarlatina.	Rate per 1,000 per Annum.	Diphtheria.	Rate per 1,000 per Annum.	Measles.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum.
2,173,906	687	237	10	0.06	51	0.3	2	0.01	12	0.07	21	0.1	141	0.8
96%	88%													

JANUARY, 1899.

2,232,053	717	290	23	0.1	48	0.3	5	0.03	9	0.05	21	0.1	184	1.0
98%	92%													

Population of Province 2,283,182

Registration Divisions of Province 777

The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. V. TORONTO, ARPIL, 1899. NO. 4.

Editorials.

INTRAVENOUS SALINE INJECTION.

Two years ago we published an article in this journal, detailing the opinions expressed by Dr. Bosc, of Montpelier, on the advantages of bleeding, followed by the introduction into the blood by transfusion, of a physiological saline solution (.75 per cent.), in pneumonia, uremic convulsions, Asiatic cholera and poisoning by illuminating gas. A modification of this treatment has also been used in acute hemorrhage, the preliminary bleeding having, in

some cases, resulted from parturition, in others from an injury, or an operation, and the transfusion being employed to make up for the blood which has been lost.

An article detailing some original experimental work by J. O. Cobb, M.D., surgeon in the United States army, which appeared in the New York *Medical Journal* (January 28th), shows that this procedure is of the first importance in the treatment of hemorrhage. The operator details experiments made on dogs, twelve of which were used. He bled from a jugular vein, on one side of the animal's neck, and injected the saline solution into its fellow on the opposite side. The instruments needed are few. The cannula, sold by instrument makers, should be connected to the container of the saline solution by about two yards of clean rubber tubing. Any vessel, which is graduated, such as a large funnel or bottle, will serve to hold and mark the amount of solution introduced. The saline solution used is sodium chloride, seven grammes to a thousand cubic centimetres of water. Dr. Cobb says:

"Do not let the patient die while the solution is being sterilized. Be prepared for such emergencies; if not, introduce the solution without sterilization, if the case is urgent.

"If one does not have time to weigh the salt, take a teaspoonful and toss it into two pints of water.

"It is an easy matter to be prepared for an immediate saline injection, for Parke, Davis & Co. are now preparing sterile, normal, saline solution, put up in ounce bottles, which, added to the necessary amount of water from the hydrant, kettle, or sterilizer, makes the solution ready for instant use.

"Attention is called to the operation as it is usually performed on a patient, if one has the time and is prepared for such an emergency as hemorrhage.

"Thoroughly scrub the arm and prepare the field as carefully as would be done for any operation. If the patient has bled much, it will not be an easy matter to find the veins, as they are collapsed and colorless. Make the incision over the course of the vessels down to the subcutaneous fat, and then cut directly across the course of the veins. If there is any trouble in finding the veins in the arm, a large vein can always be found in the leg—the saphenous.

"After finding the vein, pass two ligatures around it about an inch apart. Start the fluid through the tube, and then cut into the vein with sharp-pointed scissors between the two ligatures. The

solution must be kept running, while the cannula is being inserted, to prevent the introduction of air. Immediately tie in the cannula, not cutting off the suture; the other is tied and cut off. After the solution is introduced, dissect up about two inches of the vein, put on another suture, and cut out that part of the vein between the two sutures.

"It is not necessary to take accurately the temperature of the saline solution, if one is in a hurry.

"If the solution feels comfortably warm to the finger, no harm will result from its introduction. The temperature should be about 114° F., but if it is 125° F. do not lose time in cooling it.

"It was astonishing that no apparent harm resulted from the introduction of saline solution at the extremely high temperature of 130° F. One would naturally believe that such a temperature would coagulate the albumen and seriously damage the red cells.

"The saline solution given with inhalation of oxygen will save almost hopeless hemorrhage cases.

"Do not waste time in getting the solution into the circulation.

"It is urged that the solution be introduced into a vein, after a severe hemorrhage, in preference to the slow method of subcutaneous injection.

"To furnish as much blood as possible for the purpose of carrying oxygen, bandage tightly the extremities, thus forcing the blood in the capillaries back to the heart. The introduction of small quantities of air into the circulation seems to make no particular difference, for undoubtedly air was introduced into the circulation of all the dogs in these experiments.

"From these experiments one is led to believe that in opium poisoning it would be advisable to withdraw five hundred cubic centimetres of blood and introduce five hundred cubic centimetres of saline solution.

"In the early stages of pneumonia it seems reasonable to believe that the withdrawal of blood, and replacing it with normal saline solution, would relieve the tension of the pulmonary circulation in the early stages, and would furnish a fluid which would more readily take up oxygen.

"Saline solution and oxygen in uremic convulsions or threatened eclampsia has already been proved the most efficacious treatment."

The only view expressed by Dr. Cobb which seems hard to believe is, that the introduction of small quantities of air seems to make no particular difference, for undoubtedly air was introduced into the circulation of all the dogs in these experiments.

While this statement may be reassuring to surgeons, who have not, as yet, attempted bleeding-transfusion, it does not seem necessary that any air should be introduced into the circulation if the solution is made to flow freely through the rubber tubing, before the cannula is inserted into the cut vein. J. J. C.

THE BIRTH-RATE IN ONTARIO.

In his annual report for 1897, the Deputy Registrar-General for Ontario plainly says that the low birth-rate of this Province is due to the practice of Malthusianism. The figures, which he publishes and which are here reproduced, are, however, a sufficient justification for so serious a charge.

Birth-Rates and Death-Rates in Different Countries and States per 1,000 Population.

Countries.		Births.	Deaths.	Natural Increase.
United Kingdom	1896	29.2	17.1	1.21
German Empire	"	36.3	20.08	1.55
Italy	"	35.0	24.2	1.08
Austria	"	38.0	26.4	1.16
France	"	22.7	20.2	.25
Canada—Ontario	1897	20.9	12.2	.87
" Quebec	1896	38.57	20.05	1.852
United States—Maine	"	22.23	16.07	.616
" Vermont	"	21.2	16.5	.47
" Massachusetts	"	27.0	19.0	.8

The birth-rate of this Province is thus seen to be the lowest of any country or State in the list, and if a natural increase of .87 per cent. in our population can be shown, that fact is largely due to the operations of hygiene, which helps powerfully to lessen the death-rate. As will be seen, the death-rate of Ontario is only 12.2 per 1,000 population.

Physicians, who, more than most men, are informed of the secret springs of action in family life, will not be surprised at this charge, for the behavior of the Ontario people in preventing the growth of large families is no secret to them. In the last analysis, a family has to be considered from the economic standpoint. To have a large family is now looked on by the Ontario materfamilias as most undesirable. Incomes are small and sometimes inadequate,

when compared with the necessary outlay for living expenses; a small family can be properly looked after by a mother, but a large family is beyond her power to keep in decent condition. Moreover in the case of a selfish or pleasure-loving woman, such pretexts become unanswerable reasons for refusing to obey the provision for the perpetuity of mankind.

It would be unfair, however, to let all the responsibility of Malthusianism, as practised by married people, rest on the wife. Sometimes, on the contrary, it is the husband who objects to have a family. This opposition on the part of the husband accounts, to a certain extent, for the small birth-rate of France; for many married women of that country, being largely influenced by the Catholic clergy in questions of a moral nature, would refuse to interfere with procreation, but are unable to overcome the opposition of their husbands. It should not be forgotten, however, in estimating the causes of the low birth-rate of France, that degeneracy has an influence in causing sterility. Dr. Roger in his recently published work ("Introduction à l'étude de la Medecine"), after describing the destructive influences of mercury, lead, morphine and especially alcohol on the human organism, says: "Whatever may be the particular form of poisoning, when degeneration reaches a certain degree, sterility supervenes. In this manner inferior and blemished races disappear." Without attempting to appreciate all the factors of so large a question in a short article, it is at least permissible to think that, if placed in happier economic conditions, under the influence of sound hygiene and pure morality, the French, like their brethren in Canada, would be one of the most prolific races of the world.

From the standpoint of health and longevity, many women should never become mothers. For instance, women who have an affection of the heart, especially when it is associated with phenomena of asystole; the phthisical; those who have persistent albuminuria and chronic nephritis; diabetics; those who have chronic anemia, which frequently, under the influence of pregnancy, becomes pernicious in character; those with a pre-existing mental taint; the syphilitic; the epileptic.

For such as these the procedure practised by Professor Spinelli and described in *Archivio Italiano di Ginécclogia* for October 31st, 1898, appears to be a trustworthy means of preventing the evils of an undesirable maternity. The operation consists in opening the anterior fornix, between the bladder and the uterus, dissecting the

bladder away and drawing the fundus uteri through the wound. The tubes are then ligated in two places and divided between the ligatures, unless disease renders it necessary to remove one or both of them. Professor Spinelli says that this operation is easy of execution and does not entail any special danger. He considers it superior to oophorectomy, which has proved to be often injurious to the entire organism.

Healthy married women do not require any such operation. Recently, from disclosures made in the daily press of England, it was thought that tendencies were at work which would lower the birth-rate of that country; but the latest returns of the Registrar-General do not bear out such an inference. The London *News* observes: "In the first nine months of the current year the birth-rate in England and Wales has averaged 29.8, which compares favorably with 29.7 both for last year and the year before." The Englishwoman at home has not yet struck her flag to Malthus. We hope her Canadian sister will be equally womanly and courageous, lest it be said in the coming time that the Anglo-Saxons, though no discrimination was urged against them, were afraid to face the realities of life in a British colony, and, abandoning their country's cause, called in the children of the Celt, the Frank and the Teuton to possess what they had not the fortitude to hand down to their own.

J. J. C.

A NEW SERUM FOR THE CURE OF PNEUMONIA.

Last month the medical world was informed that Professor Wasserman, a pupil of Professor Koch, of Berlin, had discovered a serum which would cure pneumonia. Whether it be so or not, or whether it also may be relegated to the same fate as Koch's discovery of now some years ago, which turned things topsy-turvy and caused every scientist to flock to Berlin in search of the precious liquid, remains to be seen. It might be well to take the newspaper reports so far *cum grano salis*. Dr. Wasserman has obtained the serum by inoculating rabbits with the bacillus which advanced scientists have identified as causing pneumonia and as peculiar to it. A subsequent series of experiments showed that it was in the red marrow of the bones that antitoxin is produced, and that red marrow taken from a human corpse after death from pneumonia and used as a serum will cure mice infected with that disease. It is but fair, however, to say here that Wasserman was not the first

to find a serum with which to treat pneumonia. That honor was won by two Italians—Professor De Renzi and Professor Pane, of the Medical Clinic of the University of Naples. Dr. Antonio Fanoni, of New York, was at one time a student of De Renzi's, and says that Professors De Renzi and Pane obtained their serum from the blood of a donkey which they had inoculated with the bacillus of pneumonia.

We are informed that in treating pneumonia by this serum ten cubic centimetres are injected hypodermically twice a day. No other treatment is necessary nor should be used, save that plenty of fresh air should be permitted to enter the sick-room, and the patient should receive milk, broth and yolks of eggs as nourishment. De Renzi and Pane think the serum acts as an antitoxic; Klemperer, Emmerik, Maragliano, all distinguished men, claim it is an anti-bacteric.

For awhile the physicians of the Academy of Naples controlled the use of it and successfully treated thirty-two cases of pneumonia. The use then spread to other Italian and foreign clinics, and successful results have been reported in such journals as the English *Lancet* and *British Medical Journal*. As regards the therapeutical effects of this serum when used in his private cases, Dr. Fanoni says:

"After the first injections the patients began to feel a great relief, the fever gradually diminishing, and the disease became modified little by little, losing its most serious symptoms until the patient became convalescent.

"You can best judge of the value of this serum when you understand that Professor Bacelli, of the Medical Clinic of Rome, has said it should be used in pneumonia for the same reason as quinine is used in malaria—it cures. And Maragliano has said that the problem of the treatment of pneumonia is solved by its use.

"In the opinion of these distinguished physicians all the palliative remedies for pneumonia are discredited. When the patient does not die his recovery is due only to his natural constitutional strength, and not to the ordinary treatment administered by the attending physician.

"The true and rational remedy for pneumonia now is the antipneumonic serum, just as Behring's antitoxin is the remedy for diphtheria."

Dr. Fanoni is firmly of the opinion that those who do not believe in serum therapy at the present time do not understand

it, and says that those who think that pneumonia can always be combated or cured by natural resources should read the statistics of Fränkel and Keishe, which prove the high percentage of deaths in this disease. All we can say is that we earnestly hope that, for the sake of suffering humanity, the new serum will fulfil the expectations already predicted for it, but the time has not yet come when a definite opinion can be expressed as to its use as a therapeutic agent. W. A. Y.

SICK CHILDREN'S HOSPITAL VS. TORONTO ORTHOPEDIC HOSPITAL.

We think that it has become a recognized fact that this journal has, ever since its inception, been strongly opposed to the multiplication of charities, as also the unnecessary duplication of public hospitals, all of which are making such inroads into the income of the long-suffering physician. We are as strongly of that opinion now as heretofore, and feel that in many respects, the Charity Aid Act, under which such institutions are managed and regulated, requires material alteration so as to prevent its clauses being misinterpreted. Last month an application was made to the Ontario Government to have placed upon a similar basis for government support, as the other public hospitals and institutions are, the Toronto Orthopedic Hospital, an institution not long opened, and, as the name indicates, devoted to surgery for the relief of deformities. We do not propose in this article to voice the views or to man the cause of any particular hospital or board of trustees, but we do say that the opening of the Toronto Orthopedic Hospital is salutary and will not tend to duplicate the work of any other hospital in Toronto, or for that part, so far, in Canada. We think that it would have been wiser if the President of the Board of the Sick Children's Hospital, when he appeared before the Attorney-General at the time this application was being made, had shown more kindly feeling to those on the other side than he did, as reported in a lengthy article in his own paper a day or two following.

For Mr. Robertson to make, we might say, the charges he did towards such men as appeared upon the opposing deputation, was unseemly. We are sure that, in thinking the matter over afterwards, he could not but regret his action as not exhibiting that brotherly feeling taught by the Order of which he is so prominent

a member. We could go into the matter at length; but as our space is already so overcrowded, refrain in this issue from doing more than draw attention to one or two of the statements made the day the deputation waited upon the Government for the purpose already alluded to. There is a certain amount of truth in what Mr. Robertson held, viz., that a large percentage of orthopedic cases which can be benefited by surgical interference, occur under the age limit of the Sick Children's Hospital; but it must be remembered that, on the other hand, many cases occur which, on account of the age, could not be admited into the Sick Children's Hospital under its present *stringent* rules, and which at the same time could be very materially aided if they had the necessary facilities for treatment.

We took occasion in last month's issue to refer to the beneficence of this gentleman in his work for years past in connection with the Sick Children's Hospital, and indeed his efforts are worthy of all praise; but it should be remembered that it borders upon the spirit of selfishness almost, for the Board of that institution to use such efforts to defeat the object of another hospital which they think, to some extent, interferes with one of the branches of work done by theirs. The president of the Board of Trustees is reported to have said to the Attorney-General the day the deputation appeared before him: "The Trustees of the Hospital for Sick Children have no objection whatever to the establishment of adult hospitals." Surely not, seeing that their Board have no say in the matter. Does that Board feel for a moment that they have in their hands the apportionment of the government or city grants for charitable purposes each year that they assume so autocratic a stand? We hope not. It was nothing short of contemptible that the deputation from the Sick Children's Hospital tried to make out that a large part of the $7,000 which had, during a certain length of time, been spent in purchasing orthopedic appliances for cases requiring the same at their institution had been paid to Dr. B. E. McKenzie, when they knew that what appliances Dr. McKenzie had had made by his own workmen for the Sick Children's Hospital were charged by that gentleman at nothing more than cost price. The admission made by Mr. Robertson to the effect that even the clinic books of his institution had been carefully scanned by outside surgeons, in order that certain cases might be induced to patronize other institutions, is the best proof of the truth of the statements which long ago became public property, that cases have been admitted into the Sick Chil-

dren's Hospital on the free list which had no right to be there. It would be a very simple matter for us to prove this if required. May we ask at this juncture how it is that the city of Toronto gives a stated sum per annum to the Sick Children's Hospital larger than to any other hospital in Toronto, and also why it is that the Board of this Institution is not content to draw their money *per capita* as other similar Institutions do ?

Let us ask another question, and that is, why is it that the Board of Management of the Sick Children's Hospital, if so stringent on the one hand in admitting only cases up to a certain age, are not as careful in the admission into the free wards of children of wealthy Masons, saddling both the City and the Government with their maintenance, instead of their parents, who are more than able to pay for their support. We hope that the Government will see their way to acquiesce with the request made of them by the Toronto Orthopedic Hospital, and thus be the means of extending to those who are, in absolute reality, unable to pay for such treatment the means of procuring the same, as we are assured that not a single patient will be admitted into the Toronto Orthopedic Hospital on the free list who is in a position to pay a surgeon in the regular way.

W. A. Y.

PROPOSED AMENDMENT TO THE PUBLIC HEALTH ACT.

The Legislative Committee of the Provincial Board of Health waited upon the Provincial Secretary, March 1st, 1899, to urge the necessity for an improvement in the present law respecting the appointment of Medical Health Officers. Dr. Macdonald, Hamilton (Chairman of the Board), Dr. Cassidy and Dr. Bryce, who formed the deputation, were accompanied by Dr. McKay, M.P.P., South Oxford. The deputation urged that, owing to the necessary scientific character of the work of preventive medicine and the limited means at the disposal of rural municipalities, it was impossible to have the work properly attended to. They asked that the permissive clause of the Act of 1891, providing for County Health Officers, be made compulsory, and that officers specially qualified in State medicine be appointed for the same districts as County School Inspectors, to give their whole time to public health work.

The Hon. Mr. Davis approved of the views expressed by the different speakers, but declined to bring forward a bill during the present session of the Legislative Assembly. He concurred in

a suggestion, made by one of the committee, that public attention should be directed to the subject-matter of the proposed bill, and that municipal councils and the people generally should be familiarized with the advantages of the change, before any legislation should be introduced.

A reason for objecting to the proposed bill is, that it would, if passed, oblige county councils to impose taxes, so as to raise the salaries of their Medical Health Officers. It is always difficult and, unless in matters of grave necessity, impossible to make a county council in this Province impose fresh taxes on the people. There is, therefore, little reason to think that the proposition of the legislative committee of the Provincial Board of Health will ever be recorded in any other shape, except as a pium votum. In the meantime, if for the efficient working of sanitary affairs in Ontario more help is required, the Provincial Government can easily find the men and the means. J. J. C.

MEDICAL REGISTRATION IN NOVA SCOTIA.

On March 8th the Nova Scotia House of Assembly passed a bill to aid in securing uniformity of medical registration in Canada, thus setting a most worthy example to sister provinces. Hitherto physicians registered in any other province of the Dominion could not practise in Nova Scotia, and *vice versa*. The bill now before the Legislature provides for the establishment of an Examining Board, half the members of which shall be appointed by the Local Government, and half by the Provincial Medical Board. Examinations shall be held by this body on a syllabus of requirements similar to what shall be asked in other provinces, and any medical man from another province, on passing, shall find himself on equal terms with Nova Scotia medical men. The bill also contemplates participation in a Central Examining Board for the whole Dominion. Nova Scotia's representatives on this board shall also be appointed half by the Local Government and half by the Provincial Medical Board.

We earnestly hope that this action on the part of Nova Scotia will be rapidly followed by similar tactics nearer home, as it does seem an outrage that a man who has passed the highest examinations in Ontario is not permitted to practise medicine anywhere in the Dominion. May the time be hastened when the Central Examining Board will have become a reality, and not be simply a phantom. W. A. Y.

EDITORIAL NOTES.

Her Majesty's Late Physician.—Sir William Jenner, who died on the 11th of last December, at the ripe age of eighty-three years, had been Queen Victoria's physician for thirty years, only retiring in '93 on account of failing health. Sir William was born in 1815 at Chatham, where his father kept an inn. He was educated at University College, and obtained his license from the Society of Apothecaries in 1837. In 1844 he obtained the degree of M.D., and in '48 became a member of the Royal College of Physicians. He soon gave up practice and was appointed Professor of Pathological Anatomy to University College and Assistant Physician to University College Hospital. In '52 he was elected Fellow of the Royal College of Physicians, Gulstonian Lecturer, and Physician to the Hospital for Sick Children; in '53 he was made Assistant Physician to the London Fever Hospital, and in '54 Physician to University College Hospital. In '57 he succeeded to the Professorship of Clinical Medicine in University College, and in '61 he was appointed Physician Extraordinary to Her Gracious Majesty. In '62 he was made Physician in Ordinary to the Queen, and also appointed Professor of Principles and Practice of Medicine at University College. In 1863 he was appointed Physician in Ordinary to the Prince of Wales. He was created a baronet in '68; K.C.B. in '72 and G.C.B. in '89. He was President of the Royal College of Physicians from 1871 to 1888. He was also D.C.L. of Oxford and LL.D. of Cambridge and Edinburgh. Sir William was a strict observer of professional secrecy, and withdrew from the British Medical Association some years ago because, in connection with the illness of a certain European celebrity, he considered that the rules of secrecy had been violated in the association journal. His chief works were "The Identity or Non-Identity of Typhus and Typhoid Fevers," and "On Diseases Commonly Confounded under the Term Continued Fevers."

A New English Medical Journal.—One of the most recent additions to medical journalism in the old land is *The Medical and Surgical Review of Reviews*, to be edited by Dr. Nathan E. Boyd, with offices in Connaught Mansions, Victoria Street, London, S.W. What with *The Lancet*, *The British Medical Journal*, and *The Practitioner*, one would have thought that there was hardly a sufficient dearth of medical journals on the other side of the brine

to necessitate the launching of still another. *The Medical and Surgical Review of Reviews*, however, is going to compare most favorably with any of them, judging from the January and February ('99) issues. The publication will record from month to month not only the discoveries and progress of the profession as established by the *savants* of our time, but so far as it will be possible to do so every feature of definite practical value appearing in the current medical and surgical literature of civilized countries will be adequately mentioned. The editor also says in his announcement that leading articles in all medical journals will be reviewed, digests and abstracts given, an index published regularly of the principal contents of the professional journals for the current month, but, principally, a *résumé* of the periodical, medical and surgical literature, to be supplemented by surveys of all important events relating to the profession, and special articles upon the topics of the month, will be published from time to time. In a word, *The Review* will have as its main object the telling to its readers what *is*, rather than what is *said*, and giving *facts*, not mere *opinions*. We welcome this journal to our list of exchanges.

The Medical Graduates' College Opened in London.—At last there has been awakened in old London an interest in post-graduate teaching, and the Medical Graduates' College and Polyclinic has recently been opened up at 22 Chenies Street, Gower Street, London, W.C. It will provide clinical demonstration of cases of exceptional interest, clinical lectures, practical classes on such subjects as the physical examination of the heart, lungs, abdominal and pelvic organs, diseases of the nervous system, skin, eye, etc.; bacteriology, skiagraphy, instruments and operations will be demonstrated. The college will also provide a clinical and pathological laboratory, not forgetting a museum and a library. On February 1st the college had enrolled 320 members. There is no doubt that a want of this kind has been felt for some time in England, and we feel sure that the college will rapidly enlarge as interest in it deepens.

Medical Women.—Last year twenty-one public appointments were bestowed in England and elsewhere upon medical women. Mrs. Berry, M.D., London, was made medical examiner for defective children under the London School Board; Miss Meakin, M.B., was appointed junior resident medical officer at Camberwell Infirmary; Miss Lewin was appointed to a similar post in Charlton Union Hospital, near Manchester; Miss Christie, M.D., was appointed on

plague duty in India, and was working in collaboration with Miss Carthorne, M.D., in Bombay. Mrs. Colman, Miss Keith, Miss Thorne and Mrs. Hawkes are lecturers under the London School Board on Health and Hygiene. Forty-seven new students have entered the London School of Medicine for Women since its opening last summer.

Bill to Prevent Marriage.—Dr. Russell has drafted a bill for the Legislature of Pennsylvania, with a view to securing such laws as will prevent the issuing of a license to any person "contemplating marriage unless he or she shall have received from the person, so appointed under the Act, a certificate setting forth that such applicants are free from the following diseases, any of which shall be deemed sufficient cause for refusing a license: syphilis, gonorrhea, epilepsy, dipsomania, tuberculosis, hereditary insanity, true insanity or insanity resulting from vice." In Massachusetts, epileptics, alcoholists and syphilitics are not allowed to marry; and in Texas the same rule applies to epileptics. A similar bill to that of Dr. Russell's is in force in the State of Ohio, and will be used in Maryland also.

A Hospital Staff Resigns.—Drs. Armour, Leitch, King, Merritt, Sheahan and Smith handed in their resignations to the Board of Trustees of the General Hospital of St. Catharines last month. The trouble arose over the efforts of those physicians to have certain regulations made as to the interior management of the institution, which the Board refused to comply with. We commend our confreres' action herein, and feel that if other hospitals were treated in a similar manner by their staff there would be less misplaced charity with, as a result, an improved condition of the profession generally.

Hasten to Bagdad.—The Mecca for physicians now is asserted to be Bagdad, the ancient capital of the Khalifa, the Athens of Asia of the eighth century, and the centre of Mohammedan science. With a population of 130,000 people, there are only three resident practitioners who have had a European training, and it is said they are doing all the work, the inhabitants no longer trusting their advisers of the Asiatic type. This is a hint to some M. D's in our own city who are not so busy as they would like to be.

What is the matter now?—The 1899 "Medical Directory" shows a great decline in the number of young men who joined the medical profession during the past year. It contains 34,994 names,

showing an increase of only 91 compared with an increase of 619 in the year previous. It is positively gladdening to see that at last the public are becoming cognizant of the fact that the medical profession is really overcrowded, and that young men had better choose some other occupation in life.

Public Reformatories for Inebriates.—In the establishment in England of public reformatories for inebriates, one of the code of regulations and discipline for the management of these institutions approved of by the Home Secretary is that every officer of the reformatory shall be a total abstainer, that kindness and tact are to be more effective than coercion, and that from nine to twelve months' treatment is expected to be effective in performing a cure.

Pure Culture of Vaccine.—Mr. Stanley Kent, of London, after considerable experimenting with vaccine, has discovered the specific organism upon which it depends, and has prepared pure cultures of the germ to use for vaccination purposes. Thus will be removed the great objection of the anti-vaccinators, it being now impossible to convey any form of disease to the child by this means.

Ontario Medical Association.—The nineteenth annual meeting of the Ontario Medical Association will be held in Toronto, June 13th and 14th next. Dr. J. F. W. Ross is chairman of Committee on Papers, and Dr. Harold C. Parsons, General Secretary. It is expected that the meeting will far exceed in point of numbers any previous attendance, and that the papers will be particularly interesting.

French Method of Treating Neurasthenia.—It is said that physicians in Paris are now adopting the American treatment of neurasthenia, by keeping their patients in bed for several weeks at a time, holding to the view that in order to counteract the strain due to the turmoil of every-day life, it is necessary that people should take an extra amount of sleep.

Prevention of Consumption.—The National Association for the Prevention of Consumption is going ahead in England. The Prince of Wales has lent his aid, with the result that meetings have recently been held at Marlborough House, "and the cause" has been recently greatly advanced all over Great Britain.

Munificence of Lord Iveagh.—Lord Iveagh recently gave the magnificent sum of £250,000 to the Jenner Institute of Preventive Medicine for the endowment of scientific research.

PERSONALS.

Dr. Geoffrey Boyd has removed to 570 Sherbourne Street.

Dr. Crawford Scadding will remove this month to Bloor Street West.

Dr. P. E. Doolittle has left on an extended tour of the Southern States.

Dr. A. A. Macdonald has been appointed Medical Director of the National Life Assurance Company.

Dr. D. King Smith has opened an office at 323 College Street, until recently occupied by Dr. Andrew Gordon.

Dr. Andrew Gordon has moved from College Street to his new residence on corner of Bloor and Huron Streets.

Dr. Levi B. Clemens, of Berlin, Ont., died very suddenly on March 17th, at the Berlin-Waterloo Hospital.

Dr. J. H. Etheridge, of the Rush Medical College, Chicago, died in that city in February after a short illness.

Dr. G. P. Sylvester is now the only medical practitioner having a financial interest in *The Canada Lancet.*

Dr. J. J. Cassidy lectured on "Home Sanitation," on Wednesday, the 15th ult., before the National Council of Women.

Dr. W. H. B. Aikins returned last month after making a business trip for *The Canadian Practitioner and Review.*

Dr. Ezra Hurlburt Stafford has been appointed Professor of Mental Diseases and Insanity at the Women's Medical College, Toronto.

We are indebted to the Toronto *World* for the line etching of the late Dr. Henry H. Wright, appearing in this number of the Journal.

Dr. Chas. Hodgetts was appointed last month Supreme Officer of the Grand Lodge of the Sons of England, the highest gift that body can bestow.

A clever paper, entitled "Medical Women in Modern Fiction," was read at a recent meeting in the Women's Medical College, by Dr. Lelia A. Davis, of Toronto.

Dr. H. P. McCauseland, who recently was traveller for Parke, Davis & Co., of Detroit and Walkerville, died in Baltimore, Md., about two weeks ago, and was buried in Toronto on March 16th.

Dr. G. B. Smith, who has practised on Elm Street for quite a number of years, has purchased No. 92 College Street, and will shortly move in there. The doctor will soon leave the realm of bachelordom.

Mr. Swift, the genial Canadian manager for the firm of Parke, Davis & Co. at Walkerville, was recently elected a Director of the Board of that well-known and popular house. Congratulations! The honor is but deserved.

The Medical Staff of Toronto Orthopedic Hospital is composed of the following practitioners: *Consulting Staff.*—Consulting Surgeons—Dr. L. M. Sweetnam, Dr. J. H. Cotton, Dr. S. M. Hay. Consulting Physicians—Dr. A. McPhedran, Dr. W. J. Wilson, Dr. W. J. Fletcher. Consultant on Diseases of the Eye and Ear—Dr. L. Loran Palmer. Consultant on Diseases of the Throat and Nose —Dr. Price-Brown. Anesthetist—Dr. R. A. Stevenson. Pathologist—Dr. Geo. A. Carveth. *Active Staff.*—Dr. B. E. McKenzie, Dr. H. P. H. Galloway. Lady Superintendent—Miss L. E. Applegath.

BIRTHS.

Sisley—At Maple, March 15th, 1899, the wife of Dr. Euston Sisley, of a daughter.

McCollum—On Sunday, February 26th, at 168 Jarvis Street, the wife of Dr. W. J. McCollum, of a daughter.

DEATHS.

Covernton—At Los Angeles, California, on March 16th, Theodore S. Covernton, M.D., aged 45, son of C. W. Covernton, M.D., Toronto.

Machell—At the residence of his brother, 95 Bellevue Avenue, on the 4th March, of the after effects of la grippe, Dr. Arthur G. Machell, of Owen Sound, in his forty-third year, son of Samuel Machell, formerly of Aurora. Interred at Aurora on the 6th March.

Obituary.

WRIGHT.—At 307 Sherbourne Street, on Tuesday, 7th of March, Henry H. Wright, M.D., aged 82 years.

Such was the death notice that met the eyes of the readers of our daily papers on the 9th of March. Quietly and peacefully there had slept away to his reward one of the oldest and most respected of Canada's practitioners, Dr. Henry H. Wright. Death could hardly

be said to have been unexpected, as the old gentleman had not been engaged in active work for some time past. Thus has been extinguished one of the medical beacon lights of Canada, a stamp of a man of whom there are too few left. He was indeed a man beloved by thousands, one who did good alike by his skill and his generous heart.

It is related of him that he worked for the good of his fellows rather than for the increase of worldly wealth. Many incidents might be related where a consideration of the poverty of his patients resulted in the entire abolition of fees. Thousands of Torontonians can testify to this. He was a genial man, and this faculty aided him greatly in his long and successful career as a general practitioner.

Henry H. Wright was born August 6th, 1817, in Marysburgh, Midland District, County of Prince Edward, of U. E. Loyalist parents. He was a son of the Rev. David Wright. After a common school education he studied medicine with Dr. John Rolph. He it was who enabled Dr. Rolph to escape from Canada in the turbulent times of 1837. The doctor rode his horse to Oakville and got to Niagara. Shortly afterwards the deceased and Dr. Rolph were in partnership in Rochester, N.Y.

When quiet was restored in Upper Canada, Dr. Wright came to Dundas and practised for a few years. Afterwards he was in Markham, and forty years or more ago he came to Toronto, where he has since resided and practised until two years ago.

He had practised for sixty-two years in all with wonderful success. Practically, till reorganization, he was Secretary of the Toronto School of Medicine, in which he was also a lecturer. When reorganization took place he became professor of medicine. For a number of years he was a public school trustee.

His wife predeceased him by five years, and was of U. E. L. stock, intimately connected with the Weller family, one of the first in the eastern part of the Province. The marriage resulted in two sons, both dead, and two daughters, one the wife of Mr. I. H. Cameron, Toronto, and the other unmarried.

The funeral, which was private, took place on the 8th ult., to Mount Pleasant Cemetery.

THE LATE MRS. (DR.) G. E. DIXON.

A LARGE number of the members of our profession, more especially those who graduated in Toronto about '85 or '86, will be shocked to learn of the death about six weeks ago, after a short illness, of Mrs. George E. Dixon, wife of Dr. G. E. Dixon, who, after taking his post-graduate course in London, England, practised so successfully in Minneapolis, Minn., for several years and is now engaged in the manufacture of pharmaceutical preparations,

with headquarters at London and Canadian branch at Brockville, Ont. Mrs. Dixon died at the home of her parents, Major and Mrs. E. O. Zadek, Mobile, Alabama. She was taken with La Grippe some months ago and never fully recovered from its effects. While crossing the English Channel she suffered exposure and had a relapse. This winter, while in Canada, having apparently recovered in a large measure, she was in a sleighing accident, and again suffered in health from a blow received on the head and the exposure to the weather. Finding the illness becoming more and more serious Dr. Dixon started South with her, hoping to find for her relief in that warmer climate, but the trip was at a most unpropitious time, for the blizzard crossed the continent, and the journey was made in the midst of it. Leaving Washington on Sunday the trains were continually delayed by the snow, and for hours the cars were blocked in and without sufficient fuel to keep the passengers warm. It is thought this brought on the fatal development of the disease, for when the patient reached home on Friday, she was more dead than alive. She rallied some, and seemed especially delighted with the sunshine and with the flowers her friends sent her. She was placed in the sun, and the flowers in her hand, and in her expressions of pleasure her parents and relatives believed they saw signs of a speedy recovery; but her body, never robust, failed to respond to her joyous spirit, and the favorable signs one by one vanished. She sank to rest like a tired child after a season of play, and was followed to the grave by the lament of a large concourse of friends.

Dorothea Zadek Dixon was born in 1867, educated in Mobile, and was married in 1892 to Dr. George E. Dixon, who, shortly after the wedding, moved to London, England, where for the most part the couple have resided. She was like a flower—dainty and delicate of form and feature, tasteful and intelligent, brilliant in conversation, sympathetic and loving. She had an absolute talent for music, was a skilful pianist, and a lover of the beautiful. When but a girl she exercised her influence in the formation of the first woman's vocal society of Mobile, the St. Cecilia Chorus, an organization which is in some sense her monument, and which has done much for the cultivation of good taste in Mobile. She was an only daughter, and in that office was lovable and loved as seldom any one has been. As wife she was the companion and friend of her husband, who is stricken deeply by her loss. We feel sure that Dr. Dixon has the sympathy of all his old friends in Canada, as he was always most popular. We are much pleased to know that the doctor has prospered in his business career for some years past.

The Physician's Library.

BOOK REVIEWS.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology and Dermatology, and especially prepared articles on Treatment and Drugs, by professors and lecturers in the leading medical colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by JUDSON DALAND, M.D., University of Pennsylvania, Philadelphia; J. MITCHELL BRUCE, M.D., F.R.C.P. (Lond.), Eng.; and D. W. FINLAY, M.D., F.R.C.P. Volume IV., Eighth Series, 1899. Philadelphia: J. B. Lippincott Co. Montreal: C. Roberts, 593A Cadieux Street.

Among the writers whose names appear as contributors to Vol. IV. are Dr. John Ashurst, Philadelphia; Dr. J. W. Ballantyne, of Edinburgh; Dr. Andrew Clark, of London, Eng.; Prof. Pearce Gould, of Middlesex Hospital; Dr. Sidney Martin, of the Brompton Hospital for Consumptives; Dr. T. Pickering Pick, and Dr. Norman Walker, of Edinburgh.

The only article dealt with under "Drugs and Remedial Agents" is one on "Glonoinism," by Dr. G. C. Laws. Under "Treatment," Dr. Fournier deals with "The Treatment of the Syphilitic Chancre"; Angus McGillivray writes on "The Principles of Treatment in Corneal Ulceration"; Joseph M. Matthews, "Treatment of Ulceration of the Rectum"; Dr. J. T. Eskridge, "Treatment of the Patient during the Apoplectic State from Cerebral Hemorrhage, Embolism and Thrombosis"; and Dr. Cecil Y. Bliss on "Hemoptysis and its Treatment." Under the heading, "Medicine," we find some very able articles, one by Dr. Jas. Finlayson on "Subcutaneous Emphysema complicating Broncho-Pneumonia in an Infant with Recovery"; one by Dr. Thos. Oliver on "Scurvy and Purpura"; another on "Acute Parenchymatous Nephritis," by W. C. Hollopeter, M.D. Under this department also, Dr. Francis C. Wilson deals with "Pulmonary Tuberculosis and Chronic Bronchitis," and Dr. Jos. B. Marvin with "Adhesive Pleurisy." The principal articles under "Surgery" are those of Dr. John Ashurst on "Nephrectomy for Wound of the Kidney," "Imperforate Anus in a Child," "Osteotomy for Bow Legs," Recurrent Tuberculosis," and "Growth of the Groin."

Under the same heading, "Surgery," Andrew Clark instances three most interesting and instructive cases of "Tuberculous Diseases of the Knee-Joint." Pearce Gould describes "Trendelenburg's Operation for Varicose Veins," and last, but not least, a most complete chapter, with several magnificent illustrations, on "Hernia," by Dr. De Garmo. An article which is well worthy of perusal under "Gynecology and Obstetrics," is that entitled "Menstrual Pain," by Dr. Wm. Stephenson. Dr. Norman Walker, of Edinburgh, writes for this volume on "Lupus Vulgaris," under the department of "Dermatology." The fourth volume of Clinics is all right, though we hardly think that the articles, as a whole, are as crisp as those appearing in at least two of the preceding volumes. We must again, however, refer to the fact that the system on which "International Clinics" is based, giving readers the benefit of a series of complete lectures, is a capital one. The lectures are not too long, and are, as a rule, written in a thoroughly racy manner, though we would have liked to have seen more illustrations through the book. W. A. Y.

An American Text-Book of Diseases of the Eye, Ear, Nose and Throat. Edited by G. E. de Schweinitz, A.M., M.D., and B. Alex. Randall, M.A., M.D., Ph.D. Philadelphia: W. B. Saunders. Toronto: J. A. Carveth & Co. Cloth, $7.00; sheep or half morocco, $8.00.

The reviewer has grown heartily tired of text-books and systems prepared on the colloboration plan, especially those issuing from the American press. He has too often felt, after reading an article, that it had been made of a certain length that the publisher might issue a book which should sell at a certain price —that the author of the article was all "say" and very little "do."

When he happened to open this book (at page 800) the first words which caught his eye were, "I have practised the first two methods with satisfaction. The last I have never used," and he cried, "Great Scott! what is this? Here is a man who knows something from his own experience, who has opinions of his own and does not hide behind the back of the celebrated Dr. John Jones or the no less well-known Dr. William Smith. There is actually something he has not done and he is willing to own up to it. This man must be a practitioner." This is as it ought to be. The busy physician wants the personal opinion of the writer; he wants the opinion of the man who has had experience, and he wants that opinion both from the positive and the negative side. It comforts him to know that on his office desk he can talk with a man who has known what it was to fail, and from that failure to reach out to success.

In this text-book there is to be found a liberal sprinkling of the little word "I," and when one consults the index one finds the "I" to be a man of some reputation, and after reading the article the conclusion generally reached is that the "I" is both experienced and honest. Let the publishers give us more books of this character.

However novel the idea, it is a good one—this combination, within one volume, of the diseases of the eye, ear, nose and throat. The oculist must have a good knowledge of diseases of the nose and accessory cavities; the aurist is, at times, quite at sea unless he is versed in the use of the ophthalmoscope and the appearances of the fundus oculi; the rhinologist must be acquainted with the ocular phenomena secondary to disease of the nose and accessory sinuses.

The book is well printed and well illustrated; a number of plates are old—that must necessarily be so; a few might well have been omitted, but there is an unusually large number of new ones, and these actually illustrate the subject.

J. M. M.

Introduction à l'Etude de la Médecine. Par G. H. Roger, Professeur Agrégé à la Faculté de Médecine de Paris, Médecin de l'hopital de la Porte d'Aubervilliers. 1 volume, in 8vo de 950 pages, cartonné a l'Anglaise. Prix 7 francs. Georges Carré et C. Naud, editeurs, 3, Rue Racine, Paris.

We have been favored with a copy of this elegant little book, which, while specially intended for medical students, will be very interesting and instructive to practitioners, particularly those who wish to obtain an accurate view of scientific medicine.

The work is divided into twenty-four chapters, forming a volume of 857 pages, followed by a lexicon of 95 pages, giving the meaning of such technical terms as the author has employed. In the first portion of the book Dr. Roger explains the nature of disease, and how and why disease is produced. The evolution of disease and the mechanism of lesions form the second part. The recognition of disease and the methods of treating it, or, in other terms, clinical medicine and therapeutics, are described in the third part.

Dr. Roger's eminently practical view of the importance of therapeutics may be gathered from the following citation: "The objects of medicine being to relieve the patient and to cure disease, all our efforts should be directed toward therapeutics. The preliminary studies we make, the examination of patients, the study of symptoms, of physiological and pathological processes, and also of etiological conditions would be quite barren and illusory, if we fail to find in them a means of modifying favorably the evolution of a disease."

The book is a model of its kind, well written, modern, and, being the work of a teacher of medicine, should be useful to students and professors alike. Messrs. Carré & Naud, the publishers, are to be congratulated on its clear typography and portable form. J. J. C.

Diseases of the Eye: a Hand-Book of Ophthalmic Practice for Students and Practitioners. By G. E. de Schweinitz, A.M., M.D. Third edition. Philadelphia: W. B. Saunders, 1899. Toronto: J. A. Carveth & Co. Cloth, $4.00; sheep or half morocco, $5.00.

From time to time the persuasive book agent has strolled in upon me with a new edition of De Schweinitz, and has sauntered out with four dollars lawful coin of Her Majesty's realm. So much have I appreciated De Schweinitz that I have bought every edition which has been issued, and have given away to some friend the old one. I have not bought the book because it contains any special amount of G. E. de Schweinitz, A.M., M.D., but because it is one of the most up-to-date *résumés* of ophthalmology with which I am acquainted. I like to loll back in my chair and think, "There is that poor devil De Schweinitz grinding away at the current literature. I'll pay him four dollars—a reliable patent digester is cheap at that rate—and get what is worth having. Some men have the digestion of an ostrich." I would willingly add a few dollars more if his publisher could be induced to change some of his illustrations. Figures 47, 48, 53 may be very instructive, but they are not works of art. Mr. Saunders has gone so much into the art journal in some of his publications that the suggestion may be forgiven. J. M. M.

REPORT RECEIVED.

"Report relating to the registration of Births, Marriages and Deaths in the Province of Ontario, for the year ending December 31st, 1896." Printed by order of the Legislative Assembly of Ontario. Toronto: Warwick Bros. & Rutter, printers, etc., 68 and 70 Front Street West. 1898.

Electricity will Destroy Bacilli.

Mr. Nicola Tesla claims to have discovered a means of safely applying a rapidly alternating electric current of high voltage to the human body, thereby destroying the bacilli of all diseases. It is reported that his theory is that each cell of the human organism is a minute electrical battery, and that a modified but powerful current can be made to stimulate the action of each cell, and by increasing oxidation destroy any disease germs present in the body. Though it has been established that rapidly alternating currents of high voltage can be passed through living persons without causing inconvenience, almost without being felt, and without injuring the tissues, it has not been proved that disease germs can be destroyed in this manner without injury to the subject. The difficulty seems to be that an electrical current fatal to disease germs would also, in all probability, be fatal to other, beneficent and necessary, bacteria within the human body.—*The Med. and Surg. Review of Reviews.*

Medical Miscellany.

DR. DRUMMOND'S LECTURE.

It was a delighted audience that crowded the hall of the Chemical Building of the University of Toronto, on the afternoon of February 18th, and listened to Dr. Drummond's lecture on the Habitant. The poet-doctor told his story of the "Kindly folk" of Quebec, charmingly. In him the French-Canadian, particularly the French-Canadian of the country districts, has a friendly advocate, who loves to tell of his homely virtues. The people of Quebec are "a nation within a nation," said the lecturer, made so by circumstances, by geographical location and by climate. The name Habitant is an honorable one. It was the one given to the fearless adventurous ones, who, leaving the protection of cities and forts, went into the wilderness, gun in hand, and won homes for themselves, and such is the force of heredity that nowhere can better and hardier pioneers be found than the descendants of these old-time settlers. The doctor spoke enthusiastically of the many good qualities of the habitants. Their thrifty, saving ways were aptly illustrated by telling how, only recently, one when paying for a farm gave a number of gold coins of the coinage of Louis XIV. In a sense they are independent of the outside world, for if need be their farms supply all they need; the rise and fall of the sugar market has no terrors for a people whose saccharine supply comes from their own maple sugar woods, and an increased duty on cigars does not frighten those whose tobacco supplies are raised in their own gardens. But though thrifty, the habitant is "moderately poor;" a few may have saved till they have money to lend, but these are the exceptions. Among them love of country, parental affection and the practice of the golden rule are everywhere exemplified. The habitant is the embodiment of courtesy, and each is a rustic Chesterfield. Never by any chance will one allow himself to smile at the attempts of the rough-tongued Englishman to master the French language. The habitant is the most charitable of men, he never refuses an appeal for aid, orphaned children are never thrown on the cold charity of institutions in Quebec, for the neighbors are always willing to adopt them. The doctor's descriptions of the customs of the habitants were rich with humor and replete with pathos, and the audience manifested their delighted appreciation by frequent and hearty applause. The notary public and the parents arranging a marriage contract was a word picture which will live in the memories of those who heard it, and so will the doctor's description of the rural story-teller. The habitant was described as a born politician, who is thoroughly master of the rules of the game, and possessed of a native shrewd-

ness and individuality which not infrequently troubled the professional politician. Perhaps the doctor was at his best as he told of what, not Canada alone, but North American civilization owes to the French-Canadian; of how the adventurous explorers and voyageurs had been the pioneers of civilization over the entire continent. To the very evident delight of his audience Dr. Drummond read a number of his poems, rendering them in a way which gave to them a peculiar charm.

THE SURGEON AND THE SOLDIER.

"The Surgeon and the Soldier" was the title of an interesting paper read by Surgeon Lieutenant-Colonel Ryerson at a meeting of members of the Military Institute last month. Surgeon Ryerson dealt concisely and comprehensively with the growth of the medical service of the British army from its inception to the present time. He stated that during the civil war in England, in King Charles' days, the first real attempt was made to organize an English medical service. It was not, however, until the time of the wars conducted under the generalship of the great Marlborough that the medical service assumed any definite form or attained any degree of efficiency. Sir John Pringle, Marlborough's principal medical officer, organized, in the face of great difficulties, a system of regimental, field and general hospitals for the armies, which rendered splendid service throughout the campaign. During the Peninsular wars, the chief medical officer, Sir James McGrigor, devised the scheme of assigning surgeons to regiments in the field, a plan which existed in the Imperial army until quite recently, and exists in Canada. The reader then described the various changes in the Imperial medical service down to 1898, when it became known as the Royal Army Medical Corps, and medical officers were given full military title. Its present high efficiency and excellent organization, he said, had been reached only after many failures and struggles, much heart-burning and a long period of unjust treatment. The British Medical Association had rendered to the organization every possible aid. In concluding, Surgeon Ryerson made the following suggestions regarding the medical service of Canada's force: (1) Abolition of the regimental system of medical officers, and the formation of a Royal Canadian Medical Corps, to which all medical officers would belong, those not attached to units or on the reserve to be attached to the bearer companies. (2) Instruction to medical officers in their duties and required proficiency in company and ambulance drill. (3) Medical officers, like combatant officers, should pass a qualifying examination within twelve months of their appointment, which should be provisional, and not higher than that of lieutenant. (4) Each military district should have a proficient principal medical officer, in most cases a permanent officer, but not necessarily in all. (5) Medical officers should have control of

transports and supplies for hospital purposes, including food and medicines for all connected with the hospitals in camps of instruction or for service in the field. (6) On all field days medical departments should be exercised in their special duties. (7) A reserve of medical officers consisting of those who have retired from active connection with the force, and competent medical men who would be willing to serve in time of war. (8) The names of nurses of the Red Cross Society who would be willing to serve in war time should be registered by the Militia Department. (9) Knowledge of first aid to sick and injured should be diffused by lectures to officers and men, given under the auspices of the St. John Ambulance Association.

INDIA AND ITS SEASONS.

Dr. R. D. Rudolf's lecture on "The Seasons in India," given in Toronto University Chemical Buildings on February 25th, brought to a close an exceptionally interesting course of lectures in behalf of the University College Women's Residence Fund. The doctor gained his knowledge of the varied climates of India by a long residence in the district of Behar.

In India the hot weather begins in March and continues until June. It is followed by the rainy season, lasting well into October, and then the cold season, from November to March again. The speaker's remarks anent the struggles of the Europeans with the heat and dampness of the two bad seasons in India, and his description of the social life in the cold weather, between November and March, were followed with close attention by the large audience in attendance. Dr. Rudolf remarked in passing that the hot weather is not unhealthy, a fact which he appreciated while practising in India, as scientific enthusiasm dies down with the thermometer at 110. At the close of the lecture a number of lantern pictures illustrating the life, customs and scenery of India were given.

Antitoxic Relation between Bee Poison and Honey (?).

Dr. G. H. Stover (*Johns Hopkins Hospital Bulletin*, November, 1898) says that Miss M., aged thirty-five, single, consulted him on September 9th, 1895, on account of the rather unusual swelling of her right cheek following a bee sting received some days before; the whole right side of the face was considerably swollen and she felt some constitutional symptoms. After treatment for five days she recovered, and on her final visit made the interesting statement that while in the past she had never been able to eat honey, and was, indeed, nauseated by even the smell of it, since being stung she had developed a craving for it, and found that she could eat it with complete satisfaction and with no ill results. The author asks: Will some of the immunization experimenters throw light on this occurrence?—*N. Y. Med. Journal.*

Selected Articles.

REPORT OF SEVENTY-EIGHT CASES OF PULMONARY TUBERCULOSIS TREATED WITH WATERY EXTRACT OF TUBERCLE BACILLI.

A REPORT of seventy-eight cases of pulmonary tuberculosis, treated at the Winyah Sanitarium, at Asheville, N.C., in 1898, with Watery Extract of Tubercle Bacilli, by Dr. Karl von Ruck, appears in the February number of the *Therapeutic Gazette.*

The author giving due credit to the advantages of the favorable climate of the Asheville plateau as well as to the systematic employment of hygienic and dietetic methods in a special institution, shows nevertheless by his results the unmistakable favorable influence of this preparation, which he perfected in his laboratory in February, 1896.

He with many others, notably Professor Koch, have long realized that the bodies of tubercle bacilli contain a soluble substance, a proteid upon which the curative action of all tuberculin preparations and modifications must depend, small and variable quantities of which were thought to enter into the culture fluid from which the tuberculin preparations are made.

Experiments upon animals have shown that the injections of dead tubercle bacilli produce both curative and immunizing effects, but they have always produced abscesses at the point where they were injected and often spurious tubercle in the animals experimented upon, conditions which seemed to preclude their use in the treatment of human tuberculosis.

A solution of the tubercle bacilli, without injury to the curative proteids, was therefore naturally sought for, and in April, 1897, Professor Koch announced that he had accomplished this in the production of Tuberculin R., which was then given to the profession.

Several weeks later Dr. von Ruck announced his success in also making the desired solution, and communicated his experiments and methods in a paper read before the American Climatological Association and published in its transactions for 1897, and also in the *Therapeutic Gazette* for June, 1897. His method of preparation differs from that published by Professor Koch, and is briefly as follows:

The tubercle bacilli are filtered out of the rapidly growing and highly virulent culture. After washing with distilled water for

the removal of the remains of the culture fluid, they are dried in a vacuum desiccator. Next they are powdered in an agate mortar and then extracted with sulphuric ether. This extraction removes the fats. They are again dried and powdered as before, and their further extraction takes place in sterilized distilled water over a water bath with a temperature of 120° F. The proteids becoming dissolved in the distilled water, the fluid is then decanted and filtered through porcelain, when finally the amount of proteids is determined and the preparation standardized to a certain per cent.

Professor Koch simply triturated his tubercle bacilli, and then put them into distilled water and separated the undissolved germs with a centrifugal machine. His preparation did, however, not pass through a porcelain filter, and it was subsequently shown that when an attempt of filtering through porcelain was made, a residue collected in the filter consisting of tubercle bacilli.

Virulent infection followed the injection of this residue in animals, and for this reason Professor Koch was obliged to withdraw his Tuberculin R., it being an emulsion of tubercle bacilli and fragments of such, rather than a true solution.

Koch's claim that in a true solution of the tubercle bacilli the final perfection of a specific remedy was attained, would appear to be verified by the results which Dr. von Ruck reports.

He treated with his Watery Extract 20 cases in the early stages, all of which recovered, with an average gain of 11 pounds in weight, and a subsidence of all symptoms.

Of 37 cases in a more advanced stage 27 recovered, 7 were greatly improved, 3 improved, and none grew worse, gaining on an average nearly 13 pounds each.

Twenty-one cases in a seriously advanced stage were also treated, of which 3 recovered, 9 were greatly improved, 7 were improved, only 2 grew worse or died, there being an average gain in weight of 10½ pounds each.

The remedy was also given for trial to Dr. Denison of Denver, Dr. Taylor of St. Paul and Dr. Williams of Asheville, all of which obtained good results. Dr. Williams supplying the data of twelve cases treated by him with von Ruck's extract, shows 7 early stage cases all of which recovered; of 3 cases in the second stage, 1 recovered and 2 were greatly improved, and of 2 far advanced cases, 1 recovered and 1 grew worse.

Comparing his previous results with those obtained with the Watery Extract in von Ruck's institution, he shows the results as follows:

	Cases.	Recovered. %	Improved. %
Treated without Specific Remedies	816	12.1	31.0
Treated with Koch's original Tuberculin	379	35.5	37.5
Treated with Antiphthisin and Tuberculocidin	182	32.5	46.8
Treated with Tuberculinum Purificatum (von Ruck).	166	43.4	39.2
Treated with Watery Extract of Tubercle Bacilli (von Ruck)	78	64.1	33.3

Among other matters of interest, the report also contains mention of Dr. von Ruck's efforts to produce a serum, as suggested by Professor Koch, in his paper by using Tuberculin R. and his Watery Extract for immunization. Dr. von Ruck used goats for this purpose and injected them in increasing doses, reaching 70 c.c. per single dose in the course of six months.

Serum taken from these animals failed to protect or cure guinea pigs, and finding his results entirely at variance with the claims of Dr. Fisch, he purchased serum from Dr. Fisch's laboratory and treated a number of guinea pigs, all with negative results.

These experiments are given in detail, and it does not appear that the degree of tuberculosis or its course was in any way modified by the injection of this serum; the control animals showing no greater progress in the disease than did those which were treated.

Full directions are given for the use of the Watery Extract, the beginning dose being 1-1000 of a milligramme, and this is gradually increased to 5 milligrammes. There are three solutions, No. 1, containing 1-1000 of one per cent.; No. 2, 1-10 of one per cent., and No. 100 containing 1 per cent. of the anhydrous extracts.

[There is no doubt that Dr. von Ruck deserves all the credit he claims for the production of a watery solution of the proteids of tubercle bacilli, Koch being mistaken when he claimed his Tuberculin R. to be a solution of the tubercle, after having himself determined that he could not filter through porcelain without losing the specific effect. The statistics shown by Dr. von Ruck as above are most encouraging, and we think he is very wise in refusing to treat any but practically incipient cases of this disease.—Ed.]

THE TREATMENT OF TUBERCULOSIS.

BY T. CLIFFORD ALLBUTT, M.D., LL.D., F.R.S.

Dr. Allbutt remembers in his early days the fatal note of the "consonating rale." For, then, nearly all consumptives died. But Henry Bennett, a keen and original thinker, and himself smitten with the disease, threw away all traditional coddling and committed himself boldly to the open air. He was the practical maker of the "open-air cure." He went to Mentone and lived in his garden, and by night slept without windows. After a while he spent some part of the year in London, and found that even in that climate he could bear open windows without harm. A few years later Archibald Smith, Hermann Weber, Unger, and others discovered that consumptives could trust themselves in the open air, and that a warm climate was not necessary; that in the Andes and high Alps results as good or better than the Riviera could be attained. Then came Dr. Brehmer and Dr. Dettweiler, declaring not this

climate in particular, nor that, but the fresh air of mother earth to be the essential remedy—which can be found at the consumptives' own door.

Opinion, indeed, after its fashion, is now turning to the other extreme, and people are saying that any air will do: the raw damp atmosphere of English moorlands in winter, the bitter winds of our east coast, or even the murk and filth of London. Well, it is true that if the invalid cannot change his country he will do better to trust himself to such air as he has than to huddle himself up in dread of it. However, the best of our home atmospheres may be trusted too carelessly, even if they may be used by the discreet with success. Those who have the means to choose can find far better opportunities of enjoying the open-air cure: perhaps best by camping for months at a time in the deserts of Upper Egypt and Nubia, or of Syria: or, again, on the Asiatic, South African, American, or Australian prairies and uplands. Nevertheless, much and remarkable success may be obtained in England, especially in its more favored regions; yet the best results are to be had at high elevations: at Davos or St. Moritz for the young and active, in the Andes and other balmier highlands for weaker or older patients: and next to the mountains come the great deserts, especially the Nubian, and after these the open-air treatment at lower elevations, a dry, equable, and bracing air being the best. The German institutions are unsuitable for English patients of the upper classes, the habits of life and the cookery being distasteful to them. A damp soil is injurious: cold and damp air favors catarrh, and catarrh favors tubercle. Persons of catarrhal bent should either leave England, or reside on dry uplands, as on the uplands of Hampshire or Sussex. Cases in which there is a proclivity to pleurisy or sore throat (of whatever kind) are better away from Alpine climates.

Tuberculosis in time may be banished like small-pox; it has fallen into the class of infectious diseases, and must be resisted by the same methods: these are—to seek for an antidote, and to abolish the immediate cause.

Man is not a highly susceptible animal in respect of tubercle. Some ten or twelve years ago Dr. Allbutt detected tubercle bacilli in swarms in the milk of one of his cows. This milk, thus tainted, was consumed for weeks by his family, including a little girl and a young governess, by servants old and young, and by two families, one including a young wife, the other a wife of some thirty-five years of age, and seven children under twelve years old. But no one developed tuberculosis. Now, can this comparative immunity be raised into a complete immunity, say, by a protective serum or other animal juice?

It seems probable that the bacillus does not cease from the sputum for an indefinitely long time after the apparent cure of the consumption. In the animal body again, as in the cow, it may lie without giving rise to prominent symptoms; issuing perhaps meanwhile in the milk, whether, we are told, the udder be diseased or not.

It cannot be doubted that all of us are harboring, or for the most part successfully expelling, the bacillus day by day. For example, Dr. Sydney Sladen, working under Professor Kanthack, has concluded that in a certain town the milk of more than half the dairies contained tubercle bacilli in quantity sufficient to cause tuberculosis in inoculated guinea-pigs. Some such system as that of Professor Bang, in Denmark, should be enforced.

Whether we should register cases of tuberculosis, and whether we should isolate infected persons, is under discussion. In the large cities of the United States registration is making great way; the social and other hindrances to registration in England seem considerable: still, registration will probably come about. To demand isolation is fanaticism—driving hard one set of arguments with a blind eye to contingent and conflicting considerations derived from other circumstances.—*Med. and Surg. Review of Reviews.*

CONSTIPATION, ITS PRINCIPAL CAUSES AND TREATMENT.

As a general rule a person in normal health should have at least one daily evacuation from the bowels. To this there is, however, too many exceptions, some going to the closet night and morning regularly, while others allow as much as forty-eight hours and more to elapse before attending to this duty. There is a physiological process going on unknown to the individual or without his knowledge or will, so that, as a rule, at a certain time each day he is called upon to evacuate. It may be force of habit, or the partaking of a morning meal at a stated hour which sets up a rhythmic contraction of the muscular layers of the bowel, forcing the solid fecal residue down from the sigmoid flexure into the rectum, where its mere presence excites a desire for its removal. Thus far the process of defecation is purely involuntary, but beyond this it is under the individual's control, and he may either yield to this call of nature or disregard it, as he sees fit. If he resists the call and persists in doing so time after time, the desire soon passes off, and by a reverse peristalsis the mass is returned to the sigmoid flexure, there to remain till nature repeats the process. It is curious to note how in some cases abnormally long periods have been permitted to pass without a passage from the bowels, especially in some women in the lower grades of life. In *The American Journal of Medical Sciences*, 1846, page 260, a case was reported lasting three months and twenty-two days; while in *Chalmers' Medical Gazette*, 1843, Vol. XXI., page 20, a case of three years having passed without the act of defecation having been once performed is recorded. It remains a fact that ignorance and carelessness on the part of the individual is one of the chief causes of constipation. In this, women suffer more than men owing to a false sense of modesty leading them to neglect nature's calls, and because their indoor life

lessens the peristaltic action of the bowel. In many instances also, the condition of pregnancy leads to one of constipation. A sedentary occupation where brain-work takes the place of physical exercise, overeating and the necessity, as in the case of tailors and shoemakers, of sitting long in one posture, improper nutrition, *e.g.*, anything that lessens the physical powers, may be put down as causes of this condition. Another common cause is the habit of using laxatives, as also the use of some drugs, or the loss of fluids from the body by exhaustive diseases.

Another cause of constipation is the existence of any condition or disease of the rectum or anus which renders the act painful, such as hemorrhoids with ulceration, fistula, fissure of the anus, the existence of fibroid polypi in the rectum, etc., as under those conditions the call of nature will be left unattended to as long as possible.

Constipation when long continued leads to certain changes in the bowels and adjacent parts. It is the most frequent cause of piles, fissures, ulceration and abscess. Prolapse of the bowel is often caused by this condition, and cases of actual rupture from straining with fatal consequences have been reported. In addition to these results, which are external and necessarily attract the notice of the sufferer, other changes are often produced internally of which the patient may be quite unconscious. The natural result of turning the large bowel into a reservoir for solid forces is to cause dilatation of its calibre and paralysis of its walls. In this way it can assume vast dimensions. The amount of fecal matter which may accumulate in the large intestine in cases of chronic constipation is simply enormous, sometimes almost filling the abdominal cavity. The treatment of chronic constipation is not at all simple. Constipation may be due to deficient action of either the small or large intestine, and this deficient action in either case may be the result either of deficient secretion or deficient nerve power. Deficient secretion is apt to be associated with hepatic disturbance, and is marked by a dull headache, bad taste in the mouth, viscid secretion from the buccal glands, etc. For the purpose of increasing the natural secretion of the small intestine, the fruits containing citric acid, such as oranges, and other fruits as figs and apples, when the patient can digest them, all serve a good purpose. Water is also an excellent remedy, and two tumblerfuls of it taken in the morning will also be very beneficial. To it may be added a slight saline, which decreases its capacity for absorption and therefore increases the peristalsis, and the addition of a single grain of quinine is said to greatly increase its effect. This treatment, if patiently persisted in for a few weeks, will generally be followed by a good result. There are numbers of remedies upon the market which are valuable therapeutic agents in this condition. Chief among those come some of the natural mineral waters, which contain, on analysis, salines which have a decidedly curative effect. Among the latter class the Hunyadi Janos water has been the

favorite of the physicians. There is no doubt that a small draught of Hunyadi Janos taken in the morning before breakfast will in almost all cases cause a free watery action from the bowels before many hours have passed, and at the same time not have the after effect such as so many cathartic agents have of causing a condition of constipation perhaps for days after.

Deficient innervation will be found in old people, people of sedentary habits, and those who have little exercise. In these cases the partaking of water will be found only to weaken the digestive power, unless it can be combined with a different mode of life and abundance of out-door exercise. Cold bathing, however, cold against the spine and abdomen, plenty of exercise in the open air, and nux vomica will generally be found to give relief. In constipation dependent upon the large intestine, the trouble will generally be found to be due to deficient innervation rather than any lack of secretion. It is best treated by keeping the rectum empty, by nux vomica, or belladonna in doses sufficient to cause dryness of the throat, and by electricity. The latter should be in the form of the faradic current, one pole being placed over the spine and the other passed up and down along the track of the colon.

DIONIN: A NEW MORPHINE DERIVATIVE.

A NEW morphine derivative has recently been introduced to which the name "dionin" has been given. It is described by Ludwig Hesse (*Pharm. Centralh.*, XL., p. 5) as the hydrochlorate of morphine mono-ethyl ether, or ethyl-morphine, having the composition

$$\left.\begin{matrix} C_2H_5O \\ HO \end{matrix}\right\rangle C_{17}H_{17}NOHCl + H_2O.$$

It occurs as a white, somewhat bitter, micro-crystalline powder, which, under the microscope, is seen to consist of fine needles. It melts at 123°-125° C. and decomposes at the latter temperature. Dionin appears to be very serviceable, therapeutically, because it affords neutral solutions which may be advantageously employed subcutaneously. It is soluble in about 7 parts of water, in about 1.4 parts of alcohol, and in about 20 parts of syrup; while it is insoluble in ether and in chloroform. It is precipitated from its solutions by most of the alkaloidal reagents. The pure base, morphine mono-ethyl ether or ethyl-morphine, is readily liberated by alkalies, and crystallizes from water also with one molecule of water of crystallization. It is quite insoluble in water, 1 part dissolving in 286 parts of the latter; it is very soluble, however, in alcohol, 100 parts of the latter dissolving 140 parts of the base. It is also easily soluble in ether, but difficultly so in benzene, and is almost insoluble in benzin. Dionin has been employed by Dr. O.

Schroder and by Dr. J. Korte (*Therap. Monatsh.*, XIII., p. 33) in a score or so of phthisical cases, and from the results obtained, the author believes that the preparation is of unquestionable value therapeutically. It appeared to be an excellent and reliable means in the treatment of cough due to irritation in the early stages of pulmonary phthisis; and he recommends it to be used instead of codeine and morphine in all cases of this disease that are not far advanced, as well as in chronic bronchitis, pulmonary emphysema, and bronchial asthma. Not a single failure was observed by the writer among the cases so far treated by him. The dyspnea and cough were always relieved, the asthmatic attacks cut short, and expectoration favorably influenced. Compared with morphine, dionin is more mildly narcotic in action, has scarcely ever any noticeable effect on the digestive tract, and has no noteworthy by-effects. Compared with codeine, on the other hand, it is found to be more powerful generally, and more persistent in action; it affords better and quieter sleep, and increases expectoration considerably. As a general analgesic, dionin is not as reliable as morphine, but it may, nevertheless, be employed in chronic, painful affections, either internally or subcutaneously, and as no tolerance or habit is ever established, may shield many patients from acquiring the morphine habit. Its particular sphere of action will, however, doubtless be in the treatment of coughs due to irritation, and those of bronchitis of every origin; in phthisical subjects, as it affords, besides, general quiet and good sleep, stimulates expectoration, and appears to exert also a beneficial influence on the night-sweats.

Dionin may be given in doses of 0.015 Gm. ($\frac{1}{4}$) several times daily, or in one dose of 0.03 Gm. in the evening, in solution, syrup, or pill form.

POINTS IN THE ARSENICAL CAUSTIC TREATMENT OF CUTANEOUS CANCERS.

BY WILLIAM S. GOTTHEIL, M.D.

1. THE arsenious acid, caustic treatment of skin cancers does not contemplate or depend upon the actual destruction of the new growth by the caustic.

2. The method is based upon the fact that newly formed tissue of all kinds has less resisting power than the normal structure when exposed to an irritation and its consequent inflammation. Hence the former breaks down under an "insult" which the latter successfully resists.

3. If, therefore, the whole affected area can be subjected to the influence of an irritant of just sufficient strength to cause a reactive inflammation intense enough to destroy the vitality of the new cells, the older normal cells will survive.

4. Arsenious acid of properly mitigated strength is such an agent, and its application causes an inflammation of the required intensity.

5. It therefore exercises a sedative influence upon the tissues to which it is applied, and causes the death of the cancer cells in localities outside the apparent limits of the new growth, where there is as yet no evidence of disease.

6. It is superior, in suitable cases, to any method, knife or cautery, which requires the exercise of the surgeon's judgment as to the extent to which it is to be carried. That that judgment is often wrong, and necessarily so, is shown by the frequency of recurrence under these methods even in the best hands.

7. It is applicable to all cutaneous carcinomata in which the deeper structures are not involved, and which do not extend far on to the mucous membranes.

8. It is easy of application; it is safe; it is only moderately painful; and its results compare favorably with those obtained by other methods.—*Author's Abstract.*

GUMMA OF THE TONGUE WITHOUT OTHER SPECIFIC SYMPTOMS.

Dr. William S. Gottheil (*International Medical Magazine*, December, 1898) records the case of Mary H., American, twenty-four years old, who came to his clinic on April 15th, 1898, complaining of a sore tongue. Examination showed the presence of a large elongated tumor occupying the central area of the anterior part of the organ, and measuring an inch and a half in length by three-quarters of an inch in breadth. The edges and base of the tumor were moderately hard and infiltrated, but there was no characteristic sclerosis. The central part of the tumor was occupied by a ragged, deep, longitudinal ulceration, covered apparently with florid granulations. The submaxillary glands were moderately swollen and quite hard. The tumor had commenced as a small lump deep in the tongue eight weeks before, and was steadily getting larger. The exact time at which ulceration had begun could not be determined; in fact, the patient attached very little importance to that feature of the affection; there was no history of a sudden rupture, as of an abscess. There was absolutely no pain connected with the affection, and the patient complained only of the discomfort and inconvenience caused by the presence of the tumor in her mouth.

No evidences of past or present syphilis were found anywhere, and this with the age of the patient, her robust health, and the fact that she was a modest girl, had been recently married to an apparently healthy husband, and was pregnant, seemed to exclude tertiary syphilis. No stress was laid upon the history, more espe-

cially in the case of a woman; but as a matter of fact that was entirely negative. Cancer could be excluded from her age and sex. Primary tuberculosis was excluded from the appearance and course of the ulceration, and the normal condition of her lungs, larynx, and general system. The diagnosis lay between an ulcerated initial lesion and a softened gumma, with the chances apparently greatly in favor of the former.

The patient was therefore given a placebo and kept under observation. Both the tumor and the ulceration increased slowly but steadily in size. On May 4th the mass had become somewhat softer. It was then the eleventh week after the appearance of the tumor, and not a single secondary manifestation had shown itself. The diagnosis of gumma was then made, and the results of treatment rapidly proved its correctness. Under moderate doses (ninety grains daily) of the iodide of potassium, conjoined with small doses of mercury, the tumor rapidly decreased in size; the ulceration healed up; and three weeks later, when the patient withdrew from observation, there was hardly a trace to be felt in the tongue of the original induration, and the tumefied glands were reduced to one-half their former size.

The interesting point in the case, says the author, apart from the comparative rarity of the affection, is the presence of a tertiary lesion in a patient so young and presenting not the slightest evidence of luetic infection. It is an additional argument, if one were needed, of the absolute necessity of making the diagnosis in syphilis, as in ordinary dermal affections, from the objective symptoms alone, and absolutely disregarding the anamnesis.—*N. Y. Med. Journal.*

HEMORRHAGE AS A SIGN OF CONGENITAL SYPHILIS.

In the course of a description of a case of hemorrhagic, congenital syphilis appearing as a hemorrhagic, vesicular eruption, Dr. William S. Gottheil calls attention to the importance of otherwise unexplainable bleedings in infants as symptoms of congenital lues. They may be the only mark of the disease, especially at first; but they are almost invariably accompanied by a diminution of the coagulability of the blood similar to that of hemophilia, and the case usually goes on rapidly to a fatal termination. Disease of the vascular walls is one of the commonest and best-known effects of the syphilitic poison, leading to hemorrhagic discharges from the mouth, the bowels, the bladder, or the nose; to blood accumulations under the skin and mucosæ, or in the serous cavities and internal organs; or finally, making the syphilitic eruption itself hemorrhagic. The author emphasizes the importance of remembering these facts in the treatment of infants who have hemorrhagic discharges or a hemorrhagic eruption, the cause of which is obscure. —*Archives of Pediatrics*, June, 1898. (*Author's Abstract.*)

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Original Contributions.

CLINICAL REPORT ON THREE CASES OF UNUSUAL INTEREST.*

BY THOMAS H. MANLEY, M.D.,
Professor of Surgery, New York School of Clinical Medicine.

CASE 1.—*Mammoth Dermoid Cyst of the Scrotum, complicated with Inguinal Hernia.*

Patient, a German, aged 60, married, cigarmaker; rather steady drinker, but never excessive; undersized and spare habit. (Fig. 1.) His father at the age of fifty years died from the effects of an operation for a strangulated rupture. Mother died from some pulmonary affection at sixty. Always enjoyed good health until seven years ago, when he fell from a ladder a distance of about seven feet. Shortly after this he noticed a swelling on the right side. Went to a physician, who applied a truss. Soon after the truss was applied he noticed a swelling in the scrotum. As the truss caused him discomfort, and failed to keep the hernia up, he discarded it after wearing it three months. For five years after the fall he went about his usual occupation, but after this time he became conscious that the swelling in the scrotum was rapidly increasing in volume, and giving him so much inconvenience that he could not sit with ease at his bench; standing gave him pains in the loins and back, and he could only walk duck-fashion, with his legs spread widely apart. For the past two years the scrotal tumor had attained such dimensions and weight that he had to give up all regular work. It was necessary for him to have a trousers specially made to cover the protrusion, and a harness arrangement extending

* Written specially for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

up over both shoulders and across the back, from which was suspended a large canvas receptacle in which the vast scrotal bag rested. The effects of this mass finally began to tell on his general health, and besides, there was no possible position he would take that did not augment his misery. This was notably the case when he retired at night, when he had to lie on the right side severely quiet, else any movement of the body caused a drag on the tumor, with much suffering. Dressing and undressing were awkward and painful, unless someone was at hand to hold the

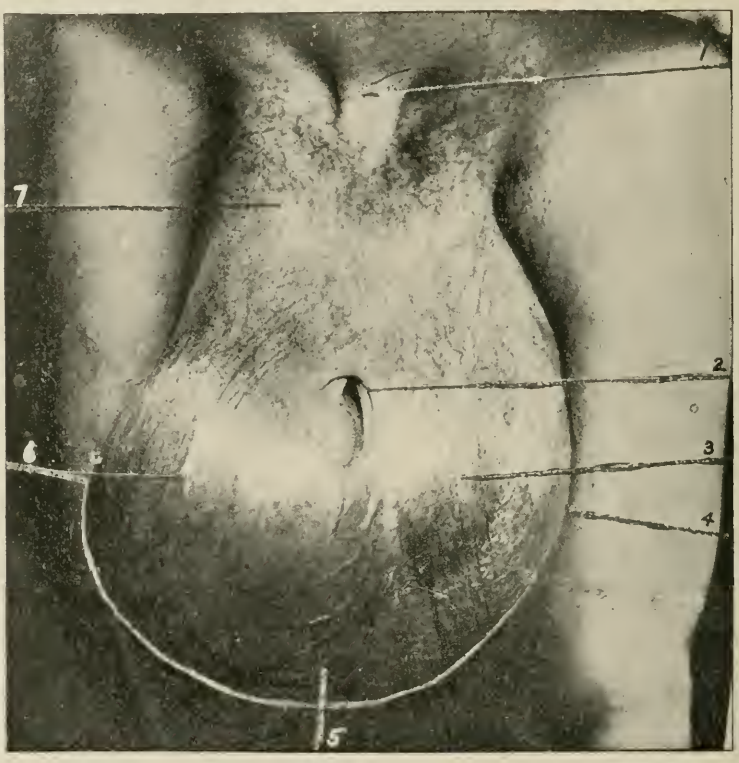

Fig. 1.—(1) Root of penis; (2) Obliterated prepuce; (3) Left testis; (4) Outer aspect of tumor, left side; (5) Base distance, long axis, 13 inches; (6) Transverse diameter, 9 inches; (7) Site of hernia, reducible.

tumor up. In the heated seasons of the year his misery was great. On August 5th, 1898, the patient was placed under my charge by Dr. George V. Hann, of this city. At this time his general condition was not good. Evidences of senility were well marked. He was weak: the appetite was poor and the digestion bad. He had frequent colicky pains and was constipated. He had an irritable bladder, with want of full control over the vesical sphincter, so that his night's rest was broken and his clothes were befouled

by decomposing urine. There was no evidence of enlarged prostate. I found it impossible to make out the meatus urinarius, to pass a catheter and collect sufficient urine for a proper analysis. The lower limb on the side involved was markedly atrophied and paresic. Psychic symptoms were well marked; the patient was exceedingly despondent, and alleged that, while he was aware that some description of operation was necessary, he knew well that he could survive none.

Local Examination.—On stripping the patient a vast scrotal tumor presented. (Fig. 2.) The enlargement here was fairly symmetrical. The tumor extended well down, nearly to the knees,

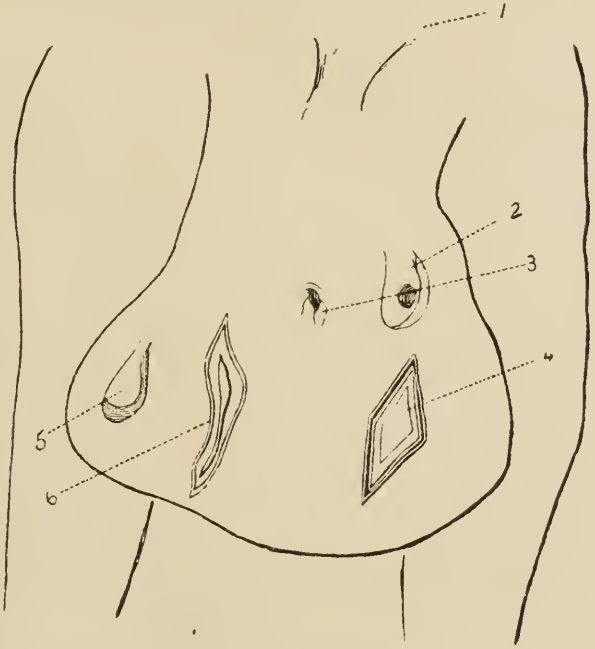

FIG. 2.—(1) Root of penis; (2) Left testis; (3) Foreskin; (4) Incision on left side; (5) Right testis; (6) Long incision on right side.

quite entirely obliterating the penis: the integument over scrotum was tense and smooth. By careful palpation the left testis could be felt, lying near the surface. On the left side the resistance to pressure was not so great as on the right, where the testis could not be located. At first sight the question arose—Was this a case of double hernia, or double hydrocele, or was it some description of cystic tumor? My examination of the patient in the erect and recumbent attitude assured me that there certainly was a hernia on the right side, but that the protrusion was not large. The presence of the free testis lying on the surface precluded the possibility of hydrocele on that side. The history of the case, with

the symmetry of outline, convinced me that we had a neoplasm to deal with, complicated by a hernia. The mass imparted a sense of fluctuation and was everywhere flat on percussion. The tumor measured 28 inches over its antero-posterior diameters and 24 over the lateral. The tumor was placed on a starch-box resting in a scales, in such a manner as to relieve all possible tension from above, and was weighed. The net weight was 14 lbs. and 12 ounces, or 236 ounces. Being assured that, at all events, we had liquid of some kind to deal with, the next question was to determine its character. With this object in view, I passed in an exploratory needle, and under suction withdrew half an ounce of

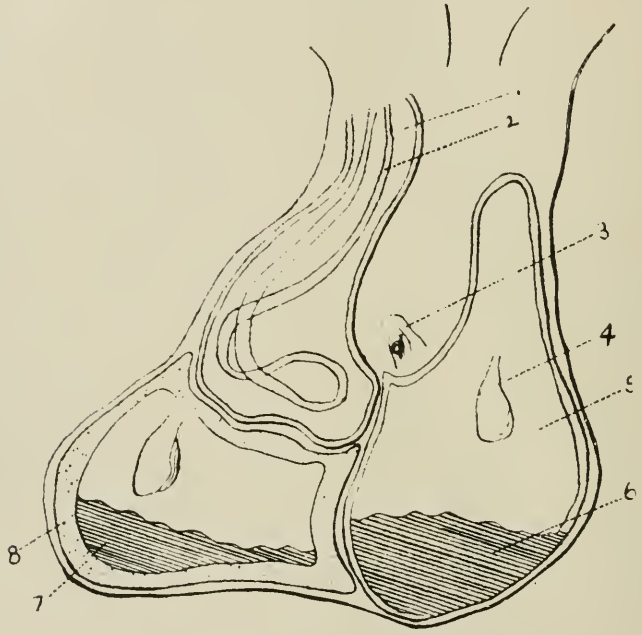

Fig. 3.—(1) Hernia sac; (2) Intestines; (3) Prepuce; (4) Testis; (5) Fluids; (6) Putty; (7) Putty; (8) Cartilaginous walls of sac on right side.

liquid from one side and the same quantity from the other side of the scrotum. This was of a reddish-brown color, odorless, and of a watery consistence. Its specific gravity was 1020, reaction alkaline. Chemist who examined the withdrawn fluid reported it as containing urea, the urates, phosphates and biliary salts, especially cholesterine. The microscopical examination revealed plenty of fat granules, disintegrated epithelia, crystals of the triple phosphates, urates, phosphate of lime and cholesterine. There was a considerable quantity of homogeneous material. In making the punctures to withdraw this fluid, the needle on the left side went in easily, but on the right force was necessary to send it through

a very thick cartilaginous envelope. As a result of the examination, it was clear to my mind that we had a dermoid cyst to deal with, probably multilocular. Now, what was the most rational and the safest course to pursue under these circumstances?

Treatment.—In a healthy, vigorous person, it is clear that in any instance of cystic tumor of the spermatic cord, the epididymis or the testis, the course to pursue is complete enucleation. But here was a man of sixty, of broken-down constitution, with evidence of senile, degenerative changes. A very large dissection would be necessary. Contamination of the wound by the urine was quite certain, rendering primary union of wound quite impossible. It was finally decided to make a free incision, to thoroughly evacuate and drain, with the hope that the endothelial surfaces might be destroyed, and that subsequent contraction might obliterate the cavities. By using cocainization, this would not require the employment of pulmonary anesthetics, and would not entail the dangers of shock from the loss of blood or mutilation, as in decortication. On the 10th of August he was operated on, the parts having been first properly prepared and cocainized. He sat in a large chair, his legs being well separated, and a receptacle placed underneath to receive the discharges. We commenced by making a free incision into the left side of the scrotum. (Fig. 3. Through this was evacuated nine pints and a half of reddish-brown fluid. Then, three fingers were introduced and a large quantity of a brown putty substance, with hairs of various lengths, were dug out. When this was cleared out and the cavity well irrigated with a 2 per cent. solution of the chloride of zinc, the tumor on the right side was opened. This had a thick, firm shell on its anterior and lateral aspect, but its posterior wall was elastic and flaccid. This contained a little more than three pints of fluid. There was not quite so much putty as in the left, but it was more gritty, and contained several large particles of calcareous substance. When this cavity was evacuated, with three fingers in it, the right testis could be located, immediately posteriorly, having a very thick vaginal tunica. By lowering the patient's shoulders, the fingers yet in the hollow sac, it was easy to completely reduce the hernia, when the penis was restored. (Fig. 4.) The after treatment was simple. The patient was well sustained with tonics and nourishing food. His appetite and sleep returned, the colicky pains gave him no further trouble, and he recovered full control over his bladder. Before operation he weighed 114 lbs., with his tumor, and now, three months later, he weighs 125 lbs. without it. The evacuated sac on the left side was firmly obliterated after operation, without infection; but the thick shell on the right side suppurated. The resisting, hard, non-vascular walls became gradually detached, and it was possible to remove them piecemeal, *per morcellement*, until all was brought through the opening, when final, solid union followed. This shell contained plaques of bone substance, histologic cartilage and tufts of tubular racemose

glands, with nearly every variety of epithelia. Now our patient is quite himself again. A considerable mass of redundant scrotal tissue remains, which he supports with an elastic pouch. The hernia is comfortably controlled by a truss, and locomotion is no longer attended with any inconvenience.

The case recorded belongs to a rare type of a very important class of tumors. Cystic tumors of the scrotum in the inguino-scrotal region, in both child and adult, are often confounded with, or mistaken for hernia, or, as in this case, they may be complicated with it. In elderly or old men they are often mistaken for hydrocele. Sir Astley Cooper's diagnostic test in differentiation is a fallacious one, as he tells us that we may always recognize hydrocele, first, by its *transparency;* secondly, by its *fluctuation*, and thirdly, by the swelling commencing *from below*. But every surgeon knows that all these signs may obtain in serous cysts. Monod and Terrillous have written a classic treatise on scrotal tumors, and

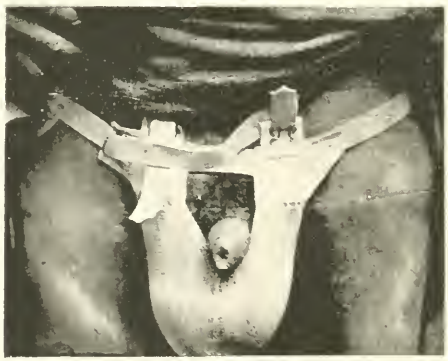

FIG. 4.—Photo showing final result: restoraton of penis, support for lax scrotum, and truss on right side.

emphasized the importance of exact diagnosis in their management. Ten years ago the writer called attention to the great number of inguinal and scrotal tumors, which are mistaken for hernia or hydrocele, and pointed out that accurate diagnosis is in many of them only possible by a free incision, when one should be always prepared to complete operative procedures.—"Serous Cysts and Cystic Formations," *Internat. Jour. of Surgery*, June, 1888.

Dermoid tumors of the scrotum are very rare. Curling speaks of them, but declares that none ever came under his own observation. Goodsir, Erichsen and Marshall have each reported cases. Verneuil and Guersant collected and carefully studied nine cases. As to their cause, Olivier believed that they were organic debris, originally of abdominal inclusion. The theory of fetal inclusion, however, is dissented from by St. Hilaire, Lebert, and Paget. Klebs and Kocher were of the opinion, that when the tumor contained heterogeneous tissue, it might be dependent on accidental grafting

in early life. Volkman and Freunzmer express the belief that these cysts originally spring from Giraldes' hydatids in the epididymis, sometimes remaining undeveloped and provoking hydrocele, by erosion, or even rupture. Melchoir, in his record of 282 cases of hydrocele, enumerates 17 as complicated by teratomata on both sides. I can find no case reported of typical dermoid of the scrotum in a man so old as my patient.

Case 2. — *Embryonic, Umbilical Hernia, containing the Stomach, Small Intestines, the Cecum and Colon, with the Liver, Spleen and Pancreas, in a New-born Female Infant.*

On the evening of October 12th Dr. L. Zwisohn, of this city, invited me to examine and operate on a newly-born female infant with a massive umbilical hernia (Fig. 5), which presented features of strangulation and impending gangrene of sac. The offspring was an eight-month child, the first-born; the mother had rather poor health during pregnancy, though her labor was natural. The infant was rather thin, but energetic, and had an immense ventral hernia through the navel opening. Soon after birth the infant showed signs of suffering, and the thin envelope covering the protrusion presented a mottled color, with signs of impending gangrene. When Dr. Zwisohn was called in consultation he advised, as a forlorn hope, the chances of a kelotomy to relieve the constriction and possibly return the extended viscera. On examination I found that we had to deal with a genuine case of embryonic hernia, the mesoblastic structures of the abdomen lying quite entirely outside, the lateral muscular plates having never closed in. The mass was of globular outline with a narrow pedicle at the navel aperture, then spreading out into a large thin-walled sac with the umbilical cord extending beyond it. The envelope was of dark purple hue, presenting patches of necrotic changes. The infant was etherized, and a free incision made through the abdominal end. Now, it was evident that there was no abdominal cavity, as nothing but a diverticulum remained, which would barely admit the tip of the index finger. Within the sac were the stomach, liver, spleen and pancreas, with the small and large intestine. Nothing could be done in the way of relief, and hence the incision was closed by suture. Six hours later the infant succumbed. An autopsy was refused. The type of hernia above recorded is very rare when of such proportions, for there we had quite an entire eventration, all the viscera being enclosed by Rathke's membrane. This deformity constituted practically a congenital monstrosity. The coverings of these herniæ are always thin, nearly transparent, avascular and very brittle. Berger, in his recent brochure, records thirty-two of these cases of the minor variety which were treated by the radical operation. Twenty-six recovered and six died. In one case recorded by Landerek, a part of the stomach was engaged in the hernia. Benedik, in another, discovered the spleen. Both Goodloe and von Hofsten recommend early operation, while Thudicum records twenty-six deaths after

the early operation. Forgue describes in detail the anatomy and surgical treatment of these herniæ when they present in the minor degree. Broca has designated embryonic extrusion as "hernia into the open canal." Delanglade describes the sac as being composed of the laminæ, between which is a layer of Wharton's jelly, and says that their thin vitelline membrane may rupture before birth, during delivery, or after the child is born. In those of a minor degree, embryonic hernia, whether into the cord or a diverticulum, is not a serious defect, but in the exaggerated type, as the one recorded, art is powerless and death is inevitable. The embryological defect leading to embryonal hernia is of singular interest. The subject is not only directly related to embryology, but comparative anatomy, a branch of anatomical science which Professor Huntington has recently introduced into the regular course at the College of Physicians and Surgeons.

Professor Mall, of Johns Hopkins Medical College, in a recent able contribution, entitled "Development of the Human Intestine

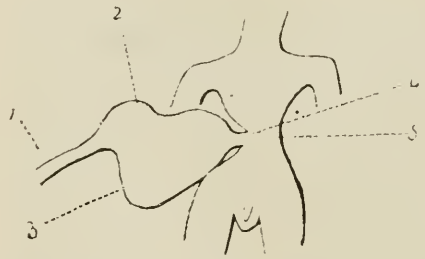

Fig. 5.—Total Eventration.—(1) Umbilical cord; (2) Cavity of sac containing all the abdominal viscera except the kidneys; (3) Gauze-like envelope of sac; (4) Constricted isthmus at base; (5) Collapsed abdominal plates.

and its Position in the Adult," in speaking of the excursions of the fetal viscera, and the rather mysterious migrations of the intestinal tube during fetal existence, says: "Although it is comparatively easy to understand how the intestine leaves the peritoneal cavity to enter the cord, it is extremely difficult to see how and why it enters. When the intestine enters the cord the communication of the cecum with the body cavity is very free and the intestine small, but when the intestine returns to the body the cavity is large while the opening is small. . . . The return of the intestine into the body must take place very rapidly, for I have never seen a specimen in which it is in the process of returning. Embryos 40 mm. long either have the intestine in the cord or in the peritoneal cavity, and, if it is in the latter, the communication between the cord and peritoneal cavity is open and surrounded by a thin membrane, showing that it also is being closed. This membrane now closes the whole opening, and later the recti muscles wander into it to complete the abdominal walls." The condition is therefore an arrest of developmental processes, which

in a minor degree occurs frequently, but disappears during the period of evolution and growth of the body.

CASE 3.—*Large, Irreducible, Umbilico-Ventral Hernia in an aged woman.*

Patient, aged 67; widow. No history of heredity nor injury. Had borne six children, the last when forty-two years old. After the last confinement, became conscious of a "lump," though, as it gave her no annoyance, she wore no support nor truss. (Fig. 6.) For past year she had colicky pains with constipation; besides, the rupture was growing rapidly. She came under my notice, with a view of an operation for radical cure, but as she had atheroma of the vessels and other marks of senile degeneration, I advised against it, but sent her to the J. C. Schuotter Co., truss and brace

FIG. 6.—An enormous acquired umbilico-ventral hernia. Eventration.

manufacturers, New York, where she was fitted with a well-constructed, ribbed abdominal supporter. (Fig. 7.) This gave her great comfort, with relief from the misery which she had formerly borne. This old lady suffered from one of the three well-known anatomical types of umbilical hernia. In the first we have illustrated, in case of the infant, the embryonic, or that in which the viscera were never within the abdomen, really not a true hernia. In the second the navel scar yields; that very common type of hernia seen in infants and children. In the third the eventration begins close to the umbilical scar, but never through it. This hernia rarely occurs except in child-bearing women, when there is commonly an extensive yielding in the median line, and the hernia hangs down over the pubis, when it may produce painful phenomena out of proportion to its volume. It is never com-

pletely reducible ; there is no independent sac, but the viscera, by a vermicular movement, insinuate themselves between the muscle sheaths and are held by firm adhesions. Secondary herniæ form in the sac, and hence the patient is in danger of strangulation or seclusion. Most of these patients are obese or asthmatic, and besides many of them have glycosuria or albuminuria. But if seen early they may be always securely controlled by a truss, though a permanent cure is rarely attained in chronic exomphocele except by surgery, which is, in this class of cases, always an extreme measure that should not be urged unless there are symptoms of incarceration or impending strangulation. Here prophylaxis is most potent if utilized early. Those women

Fig. 7.—Same, reduced and retained by the Schuotter ribbed supporter.

prone to pendulous bellies after delivery, should always convey the strain from the weakened abdominal walls to the lumbar and sacral spine by a stout binder or belt. Constipation should be avoided. In their earlier evolution firm bandaging, with reduced and prolonged rest in bed, will greatly reduce their volume, and sometimes lead to a cure. In this type of hernia as many others, by patient and persevering conservative measures, even in the most troublesome ruptures, a cure equally as efficient as by the more radical methods may be realized. In contemplating the special plan of treatment, the resources of the patient must be considered, as it is obvious in many instances the time consumed in treatment is an important factor.

REMARKS ON THE TREATMENT OF CLUB-FOOT, BASED ON THE PERSONAL EXPERIENCE OF THREE HUNDRED CASES.*

BY B. E. McKENZIE, B.A., M.D.,

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It is said that about one case of congenital talipes occurs in every one thousand children born, and that acquired club-foot is more common than the congenital variety. This deformity is one which causes much anxiety to parents, and when left uncorrected presents a very objectionable appearance, and is the cause of marked disability. It is a bar in society and in business. Its treatment has well-nigh reached perfection, and surgical art, under favorable conditions, can obtain such results as practically to annihilate the continuance of the deformity and secure perfect functional results.

This paper is based on the treatment of three hundred club-feet, occurring in more than two hundred patients, 40 per cent. of whom had deformity of both feet, and 27 per cent. of whom had traumatism or paralysis or other disease as the cause of the deformity. More than two hundred of the individual feet dealt with were instances of ordinary club-foot—congenital equino-varus. No reference is made in this paper to flat-foot, nor to cases of any kind not requiring operative treatment. Cases of foot deformity come to the surgeon at all ages, and those referred to here varied from forty-three years down to infancy.

There is an ideal time and an ideal plan of treatment if the surgeon can make his own conditions. In earliest infancy and for eight or nine months, the mother or nurse should be taught to manipulate the foot so as to stretch the structures on the inner border and increase its mobility. There are many advantages in this method over any plan of treatment which contemplates a fixed dressing, whether that fixed dressing be plaster-of-Paris, plastic fibre, or any form of club-foot shoe. The deformed foot and leg are always defective in size and general development when compared with the normal leg and foot. After correction of the deformity there is liable to be but a limited degree of motion and imperfect function at the affected joints. The plan of treatment here advocated presents this advantage, that the manipulation of the foot and leg during the rapidly growing months of infancy tends to increase development, growth and motion, whereas a plan which keeps the foot and leg at rest and submits it to a fixed dressing or appliance, partially exsanguinates the foot and leg and causes needless atrophy in a limb which already lags behind its fellow or behind the normal limb of a child of similar age and development.

* Written specially for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

There is no useful purpose served by having the position of the foot entirely rectified before the time comes when the child is learning to walk. His first steps should be made placing his weight directly upon the plantar surface of the foot. If the deformity had been corrected some months before this time, there is no natural means of retaining it in position, and will be none until he is able to balance himself upon his feet. The weight of the body pressing downward and the act of walking are nature's methods of keeping the corrected foot in this right position. Briefly, I would say that where the surgeon has the opportunity to direct the treatment of a case from the first, he should instruct the mother how to manipulate the feet and legs, so that the manipulations

Fig. 1.—S. M. at 3 and again at 7 years of age.

may tend to correct the deformity and increase mobility. As it may be assumed that the average healthy child will walk at about twelve months, the mother's care should be continued for nine or ten months, and if the instructions have been well carried out there is still ample time for the surgeon to complete the rectification of the deformity before the time shall have come when the child can walk.

The deformity in ordinary club-foot may be said to consist of three elements: First, the inturning of the foot from the line of its longitudinal axis so that the inner border is unduly concave, and the outer border markedly convex—varus; second, the relation of the foot to the leg is such that the heel is drawn upward and the

toes made to point downward—equinus; third, torsion or twisting of the foot which commonly exists partly in the foot itself, and partly in a wrong relation of the foot to the leg. This element is shown in a lowering of the outer border and an elevation of the inner.

In correcting the deformity it is very essential that the foot, *per se*, shall first be rectified, that the inturning and the torsion shall be the special objects of attack. In the vast majority of children under three years of age this may be corrected in two or three dressings, and without the use of the knife. Some may prefer to give the child an anesthetic; personally, I find no objection to dressing the foot without doing so, as the child seldom suffers for

Fig. 2.—D. T. Treatment by tenotomy and manipulation.

more than a very few minutes. Great force may be exerted by grasping the foot with the hand and twisting it toward the position of rectification. If necessary the tenotome should be employed to cut any special tendons, bands of fascia or ligaments, which in a marked way prevent the reduction of the deformity. Of course the gain thus made must be retained by a fixed dressing, of which plaster-of-Paris is without doubt one of the most convenient, applied over an ample covering of absorbent cotton. If sufficient care be taken in applying this dressing abrasions should never occur. This part of the work, namely, the correction of the deformity of the foot, *per se*, should not only be thoroughly done, but over-correction should be made before the relation of the foot to the leg

receives attention. When the varus has been converted into valgus, then the equinus should be corrected. At this point it is of advantage in the great majority of cases to cut the tendo Achillis. Only through prolonged and painful efforts can the relation of the foot to the leg be otherwise corrected in most cases. The section should be complete, and if difficulty is then experienced in bringing the plantar surface into such a position as to allow its axis to make

Fig. 3.—Jno. S., 10 years. Treatment by open incision.

an angle of eighty degrees with the axis of the leg, the knife may be further carried forward so as to cut the posterior ligaments binding the astragalus or os calcis to the tibia and extending even to the point of cutting the internal lateral ligaments. Section of the tibialis posticus and the accompanying long flexor may also be necessary. Under any circumstances sufficient cutting should be done and force applied to quite over-correct the position of the foot in regard to all the elements which enter into the deformity,

that is to say, the varus should be converted into valgus; the torsion, which lowered the outer border of the foot and raised the inner, producing supination, must be fully corrected; and the equinus must be so overcome that the plantar surface of the foot shall make with the leg an angle of eighty degrees or less.

When a few weeks have passed and healing has occurred, and tenderness of the foot has passed away, the active treatment according to this ideal plan is at an end; but if an ideal result later in life is to be enjoyed, the surgeon's supervision of the case must not cease, but should continue for some years afterward.

There are a few cases even in infants and some who are in childhood and adolescence, in whom the course to be followed is not quite so simple. Occasionally the varus cannot be fully corrected without resorting to further operative work. In most of these cases the open incision at the inner border is the best method

Fig. 4.—A. E. Treatment by tenotomy and manipulation.

to adopt. The inner border of the foot is as freely incised as the circumstances of the case demand, *i.e.*, until rectification can be made. After healing the further course of treatment is practically as in the former case.

In a few others the astragalus is found to be thrown so far forward and outward that there is no hope of being able to restore it so as to have its articular surface go normally between the malleoli. In these cases its removal is a comparatively simple operation. The enucleation of the astragalus from a normal foot, even in the cadaver, is accomplished only with considerable difficulty, but when thrown from its position, as it is in these extreme cases of equino-varus, it is not difficult.

Neither the open incision nor the removal of the astragalus

should be done without proof of its necessity; the one leaves a cicatrix at the inner border and plantar surface of the foot, the other has distinctly maimed the limb by the removal of an important bone.

Occasionally it is very difficult to place the cuboid in a normal relation to the os calcis. The latter bone is so distorted in its anterior part in some cases as to constitute a formidable obstacle to complete rectification. The relation of these bones is not easily detected by external inspection or manipulation; but unless the condition just referred to be discovered and set right, relapse is almost sure to follow. In children, while the bones are cartilaginous, this condition may be remedied by mechanical treatment, but in those who are older osteotomy of the os calcis is called for. In such a case the best procedure is to remove a cuneiform section from the os calcis a little distance behind its anterior articular

Fig. 5.—F. B., 15 years. Admitted to T. O. H., July, 1898. Second part of cut shows the feet as they were in November, 1898. Correction made without open incision or removal of bone.

surface in such a manner that its base shall be at the outer border and its apex nearly at the inner.

In some cases, in spite of the best efforts, and after the deformity of the foot itself has been fully overcome, it will still be found that the result is not satisfactory. One of the causes is a twisting in the tibia and fibula, by which the external malleolus is carried relatively forward so that the anterior portion of the foot turns inward when the knee is held in its normal direction. If this condition of pigeon-toe be present in only a minor degree, the natural use of the limb and development are likely to correct the trouble. Very seldom is the twist so strongly marked as to call for osteotomy of the tibia and fibula. When necessary, however, these bones may be cut and the twist in the leg corrected.

I have thus very briefly described what I have found to be the best methods, the selected ones, for adoption in order to secure in the most satisfactory manner the best results in ordinary congenital club-foot.

The after treatment is a matter of vast importance. There is manifested in nearly every case an inveterate tendency towards relapse, which continues to show itself for several years, especially in childhood, which fact accounts for the large number of relapsed cases. There is little doubt that in many of these relapsed cases the operative side of the work was well done, but from some fault, either of the parents or of the appliance employed or of the surgeon who was responsible for the after treatment, the foot has not been held constantly in its corrected position and the ever-present disposition to relapse to the old condition of deformity has manifested itself and brought about the unsatisfactory state which

FIG. 6.—J. J., 9 years. Correction made between September 5th and November 29th, 1898, without open incision or removal of bone.

is so often seen where the dorsi-flection cannot be produced beyond an angle, say, of one hundred degrees, and where the foot is turned inward to a greater or less extent.

In the after treatment of the case manipulation and proper exercise of the foot by the patient are of prime importance.

Children should be taught to place the foot securely upon the ground, and exercise directed toward the free movement of the foot in all directions should be assiduously carried out. Massage should be given, during which the foot should be placed always at an angle of ninety degrees or further dorsi-flexed and its anterior part carried well outward. Where these directions are followed, it

is a common thing to have the foot capable of movement through an arc of forty-five degrees or more.

At night, when the muscles are relaxed and the bed-clothes resting upon the foot, probably more is done to bring about a relapse than at any other time. To prevent this a very simple night brace should be employed by which the foot can be kept at an angle of eighty degrees with the leg.

Ordinary boots cannot be worn without great danger to the patient. The boot should fit well and have its sole well projected outward, it should be thicker also at the outer border than at its inner. Corresponding to the head of the first metatarsal there should be a strong counter to prevent the inturning of the foot. This boot also should be made upon a last whose axis is the same as that of a foot which is placed in a position of valgus. If a boot

Fig. 7.—F. B. Same patient as Fig. 5.

be thus constructed of good firm leather, it is impossible that relapse shall occur while the patient is walking about.

By a careful observation of these principles for a period which varies somewhat according to the time of life when treatment is resorted to, results may be obtained which are highly gratifying. In fact, if the treatment be commenced within the first eight years of life, and the surgeon can have a free hand to carry out his purpose, a result both in regard to form and function so nearly perfect should be secured that an ordinary observer would not have a suspicion that any defect had ever existed. Children in whom the treatment has been carried out at an age that precedes years to which memory usually recurs, may never know that they had the misfortune to have deformed feet.

In order to attain the high degree of success here claimed, it is as necessary that the active operative treatment be thoroughly done as it is that the after treatment be faithfully followed out;

FIG. 8.—H. E. at three months and at six years.

FIG. 9.—S. D., 29 years. Admitted to T. O. H., December 7th, 1898. Discharged cured, March 10th, 1899. No bone operation.

FIG. 10.—S. D. Same patient as Fig. 9.

but it must also be stated that skilful after treatment long continued is quite as important as proper operative work.

The writer does not claim to have always attained the success here portrayed, but from his experience he sets this standard for himself, and is confident that it can be obtained in all cases of non-paralytic, congenital club-foot.

The indications for treatment are not different in the adult; but the knife must be called into use much more frequently. Judging from the cases over eighteen years operated on, the prognosis, so far as rectification of deformity is concerned, is nearly as good as in the child. The function of the foot in the adult has

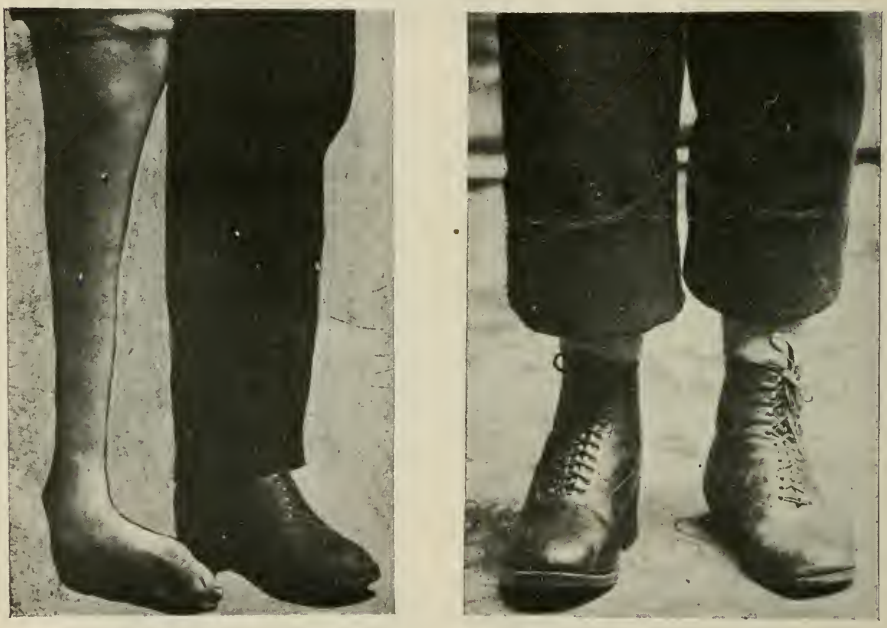

Fig. 11.—O. S., 18 years. Corrected in T. O. H. without open incision or bone operation, between November 23rd, 1898, and March 4th, 1899.

always been greatly improved; but it is likely to be less perfect than when the correction has been made in childhood.

Seventeen patients over fourteen years of age have been operated on, the eldest of whom was forty-three years. The occupation of this patient necessitates her being upon her feet very much. She claims that the change is of untold benefit to her. Eight were over twenty years of age, and seven of the seventeen above had deformity of both feet.

A reference to some of the cases over fifteen years of age, as shown in figures 5, 7, 9, 10 and 11, emphasizes the fact that such methods of operation as the open incision and removal of bone are

not always a necessity even in the adult, and when the deformity is strongly marked.

In the paralytic cases the results vary greatly. There need be no hesitation about cutting tendons or making incisions because of the paralysis. Healing occurs as kindly and successfully as in other cases. Rectification can nearly always be successfully made;

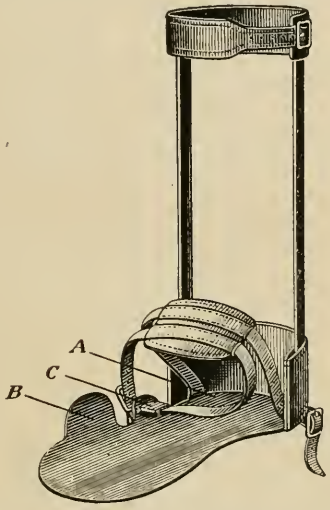

FIG. 12.—Night brace. This foot-piece is at an angle of 90° to the leg portion. An angle of 80° is better.

FIG. 13.—Club-foot boot.

but the amount of paralysis and the consequent defects of the affected part cannot be eliminated. In some cases the corrected foot can easily be maintained in its normal position, but quite as often orthopedic braces become a necessity. In all cases the use of braces should be given up as soon as possible, as having a tendency to interfere with natural development. Judging from my own

observation, braces are used in paralytics much more frequently than necessary.

In properly selected cases great gain may be obtained by transplanting tendons; for example, in some cases of calcaneus the peronei muscles are active, and not only useless but positively harmful in their normal situation, as they further increase the deformity by producing valgus, and unduly pronate the foot. In such patients the tendons may be cut, drawn from their sheath and sutured into the tendo Achillis just near its insertion.

Their power exerted heretofore in turning the foot outward is now made valuable for lifting the heel and thus overcoming the calcaneus. There are many other conditions which call for the transference of other muscles, each case calling for the fulfilment of its special indications.

No effort has been made to present this subject exhaustively and minutely, but to point out the most eligible methods as gleaned from experience. To summarize briefly:

1. The prognosis in ordinary non-paralytic club-foot is good.

2. In children restoration to form should be perfect, and function should closely approximate the normal.

3. Restrictive methods, either by dressings or apparatus, should be as little employed as possible.

4. Persistent manipulation improves function and development.

5. Operative treatment must be thorough. No part of the correction of deformity should be left, hoping that mechanical means will complete the work.

6. Intelligent and long-continued after treatment is essential to a final good result. Properly constructed boots should be worn and the foot retained in the corrected position at night.

7. Age is no bar to successful treatment. Eminently satisfactory results may be obtained in adult life. Even in the case of adults the more heroic methods of operation in many cases are not called for.

8. The prognosis in paralytic cases will vary according to the nature and degree of paralysis.

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THE CORRELATION OF INSANITY AND CRIME.*

BY EZRA HURLBURT STAFFORD, M.B.,
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Matthew Arnold was upon one occasion, it would seem, not more distressed by the conduct of a certain young woman (which was murderous) than by her uneuphonious name (which was Wragg). This was long ago, however, and the late Miss Wragg has long since been forgotten, yet the tendency for unlovely things to group themselves together is still quite as marked as then. A hideous and ghastly environment produces a hideous and ghastly community, and the deeds and thoughts of the individual members are hideous and ghastly. To Wragg and murder in the present instance might be prefixed poverty, squalor, ignorance, disease and insanity; and then the harmony between the first two will be easier to understand than when they are viewed alone, as they evidently were by Matthew Arnold. To appreciate the relation of cause and effect requires very little scientific acumen, one would think. The faculty for being easily shocked is far more common, however, than even the simpler notions of logic.

Philistine charity, in the *abstract*, is not so much a logical manner of viewing facts from a scientific standpoint, as an important factor in the rhetorical repertoire of the pulpit, and upon it are triumphantly raised the glowing superstructures of platitudinous oratory. It has become as limitless as it is unreal, but in the fine art of a technical religion it is as important as the theme in a fugue. Many a gaping niche of mental vacuity has it adorned. In the endless embroidery of words it may be faintly traced as a conventional design. It is a sacred gew-gaw for the wrapt ecclesiastic when in a state of rhetorical exaltation. It has *in hoc signo*, about as much emotional significance as the Greek votive wreaths carved on a French washstand. It is as refreshing and as natural as table napkin botany. Surely, then, a murderous and incorrigible Wragg would hardly be an appropriate object for a sentiment so æsthetic —for her remains only the *practical* charity of the Philistine. This is not utilized for the illumination of church windows. It is not at all ornamental. Those, indeed, who are supposed to be most benefited by it have not even found it soothing.

To go beneath the sleek surface of a beautifying and restraining conventionality it would seem that the sturdy and rugged barbarity of the original forest Teuton of two thousand years ago still had an active and unchanged existence. In the name of philanthropy and charity as much care to-day is taken to keep the serf class down as is taken to keep the breeding standard of horses and dogs up. There is a widespread idea that the more thorough-

* Written specially for The Canadian Journal of Medicine and Surgery.

bred horses and dogs reared the better it is, but that in the contemporaneous human species there is only room for a limited number of thoroughbreds, and that the full limit were already in the enjoyment of that distinction.

Certainly the number is very limited. The greater part of the vast mass of homogeneous human existence is of the Wragg quality. And the privileged atoms that have become by chance disintegrated from the rest, like gaudy insects rising from their native mire, have employed their privileges and occupied their time in preventing others, as far as they could, from gaining a similar advantage. The machinery by which the privileged class, that is, the class who have got all the good things, have accomplished this end so far, is on the whole complex.

The human animal in a state of nature is compounded of ferocity and timidity. When starved to a certain point the cowardice is in the ascendancy, and the state of *timor mortis* is only occasionally broken by a paroxysmal wind-puff of the former ferocity, like the last jerks of an epileptic before the stage of coma. When not starved, on the other hand, the ferocity is in the ascendancy; but in the domesticated (or civilized) man it undergoes certain changes of expression, though not of intention, and may be indicated as the instinct for tyranny. This privileged class may be regarded as the well-fed class, with the already mentioned peculiarities of the well-fed distinctly accentuated.

Among the mass, on the contrary, timidity and credulity are to be found in *inverse ratio* to the aggregate of feeding and intelligence. To maintain the present divine order of things, therefore, and to make the Wragg class quite content to do most of the dirty work and very little of the eating, their timid proclivities and easy credulity must be carefully fostered. The process, as at present elaborated, is known as "bringing comfort to the afflicted." The comfort is wholly verbal. The oracles of the sacerdotal fraternity stand for persuasion. They startle with oriental magic. Their field of terror, grown thick with the uncomfortable flowers of all the mythologies, is practically illimitable. The imagination can browse there forever. Teased with the lime-light vision of a hundred Sheols, and bewildered with the vision of a new Garden of Rhadamanthus stretching far away into luminous nothingness, grotesque, gratis and philharmonic, the present preludium of life is of trivial import; and, in conclusion, the meek shall inherit the earth—sometime, and it is very wrong to covet, but not incredible to sell one's birthright for a mess of aristocratic pottage. Moreover, Hades is very hot, but small, and in the epimetempsychotic state it will be the uneasy resting place of the select few who drink Burgundy and wear diamonds, a sufficient punishment for their greed. Valhalla is, however, sufficiently commodious for the decillions who have eaten mud and gone naked, and here a rejuvenated Lazarus, after a course of iodide, and bedecked in new clothes, will repair with the innumerable battalions of beggary.

Observe the intricate nature of this machinery. The ecclesiast, knowing in his mind that marriage is a holy ordinance, and holding in abomination a study so vulgar as physiology, alike eschewed by the Fathers and the ladies' seminary, joins in wedlock, ignorant of what he is doing, but trusting implicitly to a "higher power," a syphilitic man and a tuberculous woman, and the result is theoretically very satisfactory; for, as the rudest mind can see, the theological ceremony sanctifies such a union. And should the results be untoward, it is simply the "sins of the parents visited upon the children." The parents very reasonably should not have any sins. We will say, for example, that the particular result in this case is the bringing a number of people into the world whose actions do violence to the good taste of the normal multitude. Take one. He is addicted to appropriating the property of others with more or less elegance, or perhaps he displays a tendency to take the lives of others by the expert use of metallic or projectile instruments. Upon the strength of such actions he becomes a person who attracts considerable attention. But now being out of the province of the ecclesiast, who has already done his work effectively and intelligently, he is handed over to the public lictor, and pronounced by him to be, in the technical sense of the word, a criminal.

The "sins" of the parents have undoubtedly reached him, and quite by his own fault. He should not have resorted to *manual* appropriation or to the use of *metallic* instruments. Had he possessed the masterly cunning of some members of the privileged class, who, by using their heritage of superior knowledge instead of visible weapons, deprive, not one individual of his watch or his life, but thousands at once of their daily bread, and indirectly of their lives, he would not have been considered a criminal at all, but an ornament of Plutocracy. At least, the representatives of the law view it in that light, and the thief by wholesale lives in a palace, while the criminal spends his life in prison. He was destined to be a criminal from the hour of his birth. The laws of nature did not happen to ratify the book-holiness of an unphysiological union, even though the theological *Abracadabra* ceremonial was without flaw or error from the sacerdotal standpoint; and the contract valid from the legal. Meanwhile, to digress with reason, the child of a perfectly healthy mother by a healthy father (but between whom it had incidentally happened that no ecclesiastical rite had been spoken) is flung into the river by the much-perplexed mother, who has been ostracized by a discerning society for a crime not against nature, but theology, and she in turn is hanged for drowning the child. Thus is illustrated the conflict between nature and theology. These artificial restrictions have led to "confusion worse confounded." Yet there is no such confusion in nature; and there would be less in life were it not for the legalized meddling of a horde of besotted, self-appointed busybodies in a realm over which they have no jurisdiction, and in which the fine

adjustment for all time of the laws of nature precludes the remotest need for any such petty, interfering enforçement of artificial law.

But to return to the "lawful marriage"—and by the term I refer to one which is smiled upon by the ecclesiastic, and not one, necessarily, which is smiled upon by nature—in the case mentioned the tainted parents brought criminals into the world. It is not always so; the offspring is often insane instead. There is in fact something passing strange and elusive in the law of taint or degeneration. The difference between the criminal and the insane person is merely an external one; but the ecclesiastic and the lictor only see the external part of life at any time, and they see only the external difference here; and the degenerate victim of mental aberration is technically pronounced insane. These guardians of the race, Persuasion and Force, also have their softer moments. They indulge themselves in a moment of tenderness here, and place the insane in the merciful hands of the doctor! The lunatic shall have a habitation all for himself, with special physicians to keep him company and watch his bad eye. Having already built a prison "the force of nature could no further go," and so they make another building just like the prison, which is to be officially known as an asylum for the insane. It is not quite as disreputable to be insane, in the discriminating eyes of the public, as it is to be a criminal, and any reasonable lunatic ought to derive a great deal of alleviating comfort from the difference of name allowed to him, and to his habitation, though the regimen in both institutions is identical.

Meanwhile, as it takes money and time to enjoy or understand virtue, the serf class continue vicious, and as it takes money and time to be healthy they continue to be diseased. These two infirmities, acting and reacting in an atmosphere of stark ignorance and frantic poverty, produce permanent physical and mental conditions among this class which are not pleasant to look at or to listen to, and which are also distressing to the olfactory nerve. It takes several generations before this process of involution reaches a standstill, and the exact depth of this degradation varies at times and in places; representing sometimes an anthropological stage a little lower than the cave-dwellers, and sometimes a stage parallel with them. Meanwhile over this still miasm a dull vapor of pestilence poisonously hangs, for this is the breeding place of crime and insanity. These are the haunts of the cowering myriads who, by the machinery of an ineffectual civilization, hardly yet emerged from the appalling traditions of mediæval superstition, have been defrauded of their birth-right, plundered and cast out. Nor are the privileged classes themselves altogether immune. Into this dismal cauldron of degeneracy falls more and more thickly a gathering detritus also from this superior order of beings. What ignorance and vice have accomplished in the slum, greed and vice have at last accomplished in the mansion. The law of natural

selection, not being specifically mentioned in the canon, may with exemplary piety be ignored by the ecclesiastic; and while the cohabitation of incompetents among the starving tells more and more frightfully upon the blighted offspring, the same law of heredity holds good among a class who have found it convenient to distort the impulses of nature to harmonize with financial and social considerations. And so crime and insanity! Insanity and crime!

Let us, after the manner of *petits maitres*, compare and analyze these phenomena of civilization. The idea having been gaining ground for some time that the mental and moral conditions which constitute insanity and crime are one thing, and the buildings in which members of the community are cared for who are found to be in that mental and moral condition are another thing, there can be but a vague idea in the future of where insanity ends and crime begins, for the idea of each has in the past been associated with its environment. In vagueness, however, there is safety.

It will probably be more convenient to consider grave immorality and grave mental derangement as one thing in essence, and crime on the one hand a special manifestation of it, insanity another. Statistics are not interesting, but in our present inquiry they are convenient, showing indubitably that the population of Europe is increasing at a given ratio, and that crime is increasing in Europe (and America also) in a ratio greater than the increase of population. Statistics show, moreover, that in America, and in Europe, insanity is also very much upon the increase, and, like crime, upon an increase greater than the increase of population will naturally justify. But these statistics do not include those who have been insane outside of asylums, or criminal outside of prisons; and an enormous amount of both crime and insanity is certainly not officially recognized anywhere as such, nor shall ever be. If it were possible to add these also to the enumeration, the increase would be surprisingly greater. Yet in any case the fact that both always run parallel is forced upon the observation. They are, in fact, diverse manifestations of the same thing; manifestations which, by reason of an accidental diversity, it has been found convenient by an unscientific past to call by different names instead of seeing that they were one in cause and in origin. The belief in air, water, fire and earth as the four primal elements of nature is somewhat on the wane at the present time; but there does not seem to have been a similar enlightenment in the theory of insanity and crime, possibly because it is so difficult to draw a fine line of demarcation between them. Distinct in the extremes, they are confused in the beginnings. The criminal, as I have said, is given into the hands of the magistrate, the lunatic into the hands of the physician, and while the physician, who knows very little law, explains insanity from the standpoint of scientific research, the magistrate, who knows quite as little about science, explains crime from the standpoint of the statute. But science

and the statute are totally different things. For measuring purposes they breed confusion, being as a pair of scales to a yardstick. It would be different if the magistrate would give his criminals to the doctor, or even if the doctor would give up his insane patients to the judge, for when all were in the hands of one the standard would be the same.

The association of crime with insanity will be brought home to one who examines carefully the records of an asylum. Take, for example, the last thousand patients admitted into a particular asylum. Of the first five hundred of these, one hundred and twenty-five were so-called warrant patients, or patients transferred to the asylum from the gaol, whither they had been sent in the first place, and where they had afterwards been found to be insane. Of the second five hundred the same may be said of twenty-five per cent. In view of these figures it is just to say that patients frequently are knowingly committed to gaol as insane, when they are found to be dangerous at large, and there is not time for the usual preliminaries of admission to an asylum proper. But this does not alter the fact that nearly a third of the last thousand patients admitted to the asylum in question were, in the first place, committed to the gaol for conduct which would have been punishable by law had they not been regarded as insane. It proves nothing because those admitted as insane in the first place are not in a converse manner, on a second examination, relegated to the gaol as criminal: though in the building of so-called criminal asylums one step has been taken in this direction, which shows that insanity is sometimes found to be very closely related to crime. Statistics wherever taken, however elaborately classified, and however voluminous, will all point to the same interconnection of insanity with crime. There would not be scope here to fully analyze the nature of the offences for which these insane patients are committed to gaol. In that list may be found murder, suicide, larceny, arson, drunkenness, assault, rape and most of the crimes which are committed by the criminal himself.

Recent writers have endeavored, with great painstaking, to get at the fundamental principles of crime through a close study of the criminal himself. The criminals are measured and weighed, pricked with dull and sharp-pointed forks, photographed and cross-questioned. That there are certain well-marked stigmata in most cases goes without the saying; but the fundamental principles of degeneration lie deeper than the nerve fork or the tape line, though no disparagement is suggested of this line of investigation, for by Bertillon's method a great many valuable facts have been put on record.

As the differentiation between crime and insanity is based wholly upon the clinical signs of each, or, in other words, upon the outward actions of the subject; and as these, whether they indicate the one or the other, are, to a certain extent, incidental, it will be convenient to adopt a generic term for the primary condition

which culminates in crime and insanity; and for that no more convenient can be found than Degeneration. It may, perhaps, be unfortunate that writers upon Degeneration have, in the past, applied all their energies to some particular group. Lombroso, for example, had viewed genius exclusively, and what has been commonly accepted as genius, but it does not follow that the possession of genius presupposes degeneration, either mental or somatic; though there is no doubt in the world that in many cases of Degeneration signs of genius often exist. Genius is not in itself an indication of Degeneration, then, but many degenerates have possessed pseudo-genius. Nordau, whose work on Degeneration is merely an extension of what Lombroso has already said, and much upon the same lines, has not approached the subject from the scientific standpoint at all; but with an eye to a popular constituency of readers, merely uses the term for the purposes of the social satirist, much as Alexander Pope used the Rosicrucian theory in the "Rape of the Lock"; and Nordau's opinions have therefore about the same weight as Pope's. Nordau is very brilliant (for a German), but, as in most satires, when it comes to choosing between the exact truth and a *mot*, the latter usually has the preference. He has not seriously applied himself, therefore, to the task of clearing up the doubtful points in the subject which has given a name to his clever pasquinade, and cannot accordingly expect to be taken altogether seriously in turn. Fault might also be found with other writers upon this subject, for the logical methods of Duns Scotus are very much in vogue at the present time, and it would be more satisfactory to exchange them for the methods of Lord Verulam. It is never satisfactory to study any phenomenon from the periphery when it is possible to go to the centre, or from the mouth when it may be traced to the source.

The source of this blight, which is entirely obvious to anyone, as well as the cause, I have already touched upon. Unsanitary conditions, due to the lack of the necessities of health, accompanied by the diseases of ignorance, are at the foundation. Defect and incompetence, rendered hereditary by a clumsy and artificial domestic system, in which no thought at all is taken of the possible offspring from the standpoint of hereditary tendency, go to make inevitable the forms of degeneration which are every day becoming more common. Public and private charity are both ineffectual against it. Nothing can, on the other hand, be done by bare legislation. Treatment of particular individuals, medically or otherwise, can accomplish nothing. One might as intelligently try to limit an epidemic of typhoid fever by disinfecting the mouth of the main sewer. Nor can any fitful attempts at education, among those concerned, be expected to compass much when those who have so far been regarded as the guides of those affected, have been themselves found wanting in that *savoir faire* which is able to grasp such situations. And where all else has failed and the need is greatest, ecclesiasticism, sublimely farcical, still

stubbornly asserts that it has a panacea. But none of these agencies alone will alter the situation. There must be a complete reconstruction from the very beginning of things. The only way by which one can reasonably hope to tide the rapidly rising flood of degeneration is when science joins hands with legislation. The scientific insight that can see to do, must be given the power to do, and a blind justice—bitter satire!—law, sempiternally blind, must be enlightened by science.

The selfish ideas of the privileged class and the narrow prejudices of pompous academic oracles who, in comfortable libraries, tranquilly formulate schemes for the management of the universe, will at last have to be set aside, and a system of life, civic and domestic, entered upon which will be based upon the laws of nature and no other law.

Not Accidental Death.—In the case of Feder *vs.* Iowa State Travelling Men's Association, the supreme court of Iowa holds, February, 1899, that the death of an insured person, caused by the rupture of an artery while he was attempting to close the shutters of a window, was not "accidental," within the meaning of a policy of insurance.

The Chloroform-Burglar Bogey.—Recently our old friend the burglar of scientific craft who lulls his sleeping victims into anesthetic silence came boldly to the front in London itself. Possibly the enterprising writer, feeling that the provinces had received sufficient notice, turned his attention to the great still unworked centre of civilization and of enterprising journalism. At any rate he did not do the thing by halves, for he placed the chloroformist boldly in the midst of a medical man's household. With circumstantial detail his narrative told how the servant going downstairs in the early morning found the place ransacked, and the doctor's trousers lying at the foot of the stairs. The maid then tried to rouse her master and mistress, but failed, and on entering the room found them both suffering from the effects of chloroform. The theory is that the burglars got a bottle of chloroform from the surgery and saturated a handkerchief, which they thrust beneath the door. The idea of being able to saturate the lower part of a room with this heavy anesthetic vapor to the level of the sleepers in a bed by means of a single handkerchief and an ordinary stock bottle of chloroform is too ridiculous to discuss. This view we should be prepared to defend in the face of all comers. Meanwhile, should the story be maintained, we shall have the greatest pleasure in investigating the matter to its furthest confine. For us this bogey of the burglar-chloroformist has always had a curious attraction, shedding as it does a halo of romance around an otherwise sordid calling. Possibly it may find now and then a rare use by way of veiled advertisement. Man is a curiously cunning animal, in some of his intellectual developments.—*Med. Press and Cir.*

Gynecology and Obstetrics.

. . . IN CHARGE OF . . .

GEO. T. McKEOUGH, M.D., M.R.C.S.(Eng.), AND J. H. LOWE, M.D.

THE RELIEF OF SUFFERING IN LABOR.

W. E. Fothergill, Manchester, Eng. (*The American Gynecological and Obstetrical Journal*, February, 1899), says that the relief of pain is one of the first duties of a physician, and although fully half of the actual pain in this world is probably borne by parturient women, yet pain of this kind receives far less attention than any other form of suffering. In labor, as in everything else, precaution is better than cure, and much pain during labor may be saved by careful preparation for labor. Labor must be looked upon as a matter of muscular endurance and pluck; it is an athletic performance, and should be trained for as such. The physician should do his best to bring her up to the day of the event "in good form." She should have plenty of sleep and as much exercise in the open air as is possible short of actual fatigue. Cycling is by no means a bad exercise for pregnant women, if accidents and undue fatigue are avoided. Walking rapidly enough to quicken the breathing and increase the heart's activity is, however, the best general exercise. Alcoholic drinks and late hours must be avoided; a necessary amount of ordinary food should be taken, and no more. Constipation must be prevented. Corsets should be avoided after mid-term, or especially constructed for the needs of pregnancy. Garters should be given up in favor of suspenders. The nipples should be manipulated into good shape and kept soft and smooth by emollients. Ordinary ailments arising during pregnancy should be treated more by rest, and less by drugs, than usual.

Near the end of pregnancy women often suffer greatly from so-called "false pains." They are more irregular and continuous than true labor pains and generally more toward the front of the body. A physician often merely prescribes an opiate and goes away, telling the family to send again when sure that labor has begun. In most cases these pains are due to loaded rectum, and it is worth while to take the trouble to relieve the patient. First wash out the rectum with one, two or three enemata, then put the patient in a full length hot bath, and keep her there from ten to twenty minutes. Opium or the bromides may be used also at the discretion of the physician. Mustard applied to the abdomen will often give relief in bad cases.

The first stage of labor is generally tedious, and often accompanied by great suffering. Too many times the patient is put off with a promise of assistance later on, and nothing done to relieve the present discomfort. One thing should be done as a matter of absolute routine—the washing out of the rectum with a large enema of soap and water, with a little turpentine added. This is not only a physical but a mental comfort to a sensitive patient who is fearful of expelling fecal matter in her bearing down pains; while the absence of danger of fecal contamination for hands and instruments is a boon to the accoucheur as well. In maternity hospitals the poor, dirty patient is placed immediately in a hot bath if she enter the hospital in labor. This is practised there for cleanliness only, but the hot water relaxes the muscles and relieves the discomfort to a marked extent. "The best place for the first stage of labor is the bath-room."

Nausea and vomiting often cause suffering even in healthy women. The accoucheur usually quotes the old saying, "A sick labor is a quick labor," remarks cheerfully that the vomiting will do the patient good and does nothing to relieve it. A mustard leaf on the stomach is often efficacious, or remedies that would ordinarily be used to control vomiting can be administered. In the "colicky" pains of the uterus, due to almost continuous and irregular contraction, or where there is spasmodic action, the cervix closing rather than opening during the pains, the patient should be allowed to inhale the vapor of chloroform until once fully anesthetized. The effect should then be allowed to pass off gradually, giving a whiff now and then. The patient then usually goes on with the first stage in a more comfortable manner. Apart from these two conditions, chloroform often acts favorably on a rigid and slowly dilating cervix.

In dry labor when the membranes rupture at the beginning of the first stage, women ought often to have actual assistance in the dilatation of the os, either by the fingers of the accoucheur or by the use of the Champetier de Ribes bag.

In cases where exhaustion comes on, with little or no progress made in the dilatation of the cervix, either the patient must be given a good rest by sedatives or matters must be helped forward by the physician. If the patient is reckless and nervous as well as exhausted, enough chloroform to abolish the reflexes may be given, then a hypodermic of morphine and the patient be allowed to sleep. Often on awakening a great amount of cervical dilatation will be found to have taken place unconsciously.

If the second course is decided upon, hot baths, friction over the abdomen, change of posture, or the application of a binder may be useful. Quinine in 5-grain doses repeated every hour (for three or four hours if necessary) greatly strengthens the uterine contractions. Of course, in extreme cases where the condition of the mother or child demands haste, the cervix must be dilated by the fingers or bag.

In the second stage of labor the great question is the relief of suffering by chloroform. Any time after the dilatation of the cervix is complete, the membranes ruptured, and the way clear to the end of labor, the physician may begin giving chloroform. A few drops on a folded towel to begin, mixed with plenty of air, then a whiff or two as each pain comes on, will keep the patient resting quietly in the intervals between the pains. When the head is about to escape, push anesthesia a little farther till the patient loses consciousness, and keep her so till the head is born, then give no more.

Two minor points in this stage are the sufferings arising from cramps in the limbs, and pain in the back. The former may be relieved by hard rubbing by the nurse, and the latter by firm pressure on the sacrum. The doctor should see that the nurse does this.

Unnecessary pain is often caused by too vigorous manipulation of the uterus to expel the placenta. Unless there is hemorrhage or an adherent placenta, time should be allowed for the placenta to separate, and then a slight squeeze will expel it into the vagina.

Lacerations of a serious nature must be repaired under an anesthetic, but tears of the perineal body may be united by passing the needle through the muscle and connective tissue only, not touching the skin or mucous membrane; in this way the operation is almost painless. Catgut sutures should be used to avoid the removal of stitches. After-pains may sometimes be avoided by, from the first, allowing the patient to turn over on her hands and knees to pass water, thus allowing the clots and discharge to run freely from the uterus and the vagina. Should after-pains persist, a little opium with potassi nitras, or spiritus etheris nitrosi and hyoscyamus or belladonna as antispasmodic may be given.

Another minor detail is in the choice of an aperient; many women dislike castor oil or salts exceedingly. Why not give two or three grains of calomel, followed by a small saline in the morning?

Other details will suggest themselves to physicians.

G. T. M'K.

OPERATIVE TREATMENT OF MOVABLE KIDNEY.

Dr. Senn (*American Gynecological and Obstetrical Journal*, February, 1899), at a discussion on this subject before the Chicago Gynecological Society, described his operation. He stated that the old standpoint taken years ago, that the capsule of the kidney does not possess intrinsic reparative powers, is no longer tenable, and says that no matter what kind of suturing is done for the purpose of holding the kidney in place, the suture will never hold for any length of time. He has, therefore, abandoned for a long time the use of sutures, and relies exclusively on the intrinsic

power of the capsule of the kidney to produce firm, reliable, permanent, parietal adhesions, and the operation which he now performs has, without exception, yielded satisfactory results. The operation is this: The kidney is exposed by making Simon's incision to remove the adipose capsule, thus exposing the whole posterior surface of the kidney. He then grasps the lower pole, brings it well into the lower angle of the wound, strips away the adipose capsule as far as the hilus of the kidney, and relies on nature's resources to secure early and firm adhesions, inflicting a certain degree of traumatism upon the capsule in the form of scarifications. The upper pole of the kidney is rested in the upper angle of the wound and surrounded by gauze packing. Transverse strips of gauze are placed under the lower pole of the kidney to serve as a supporting bandage until firm adhesions take place. He leaves these strips of gauze in from five to seven days, at the end of which time the exposed capsule is seen covered with vigorous granulations. After the removal of the gauze packing the wound is dressed in the usual manner, the margins kept in contact by applying two or three strips of adhesive plaster over the dressing. Under a second dressing the wound heals without difficulty. He places great stress on the increased obliquity of the organ, so that the kidney rests in the future against the firm, unyielding support of the posterior abdominal wall. G. T. M'K.

HYDROGEN PEROXIDE IN PUERPERAL SEPSIS.

Dr. John W. Upshur (*Atlanta Med. and Surg. Jour.*, December, 1898, and *Sajous' Monthly Cyclopedia* for March, 1899) states that in puerperal sepsis the interior of the uterus should first be irrigated with a normal salt solution, secundines or other retained foreign materials removed by means of the sharp curette, and irrigations with salt solution freely used. After thoroughly drying with aseptic cotton or gauze, hydrogen peroxide is applied to the uterine cavity by means of a small intra-uterine syringe or an applicator upon which is wound a piece of aseptic gauze or absorbent cotton saturated with the agent. The foam should be removed and fresh applications made until the cessation of foaming gives positive evidence that the uterine cavity has been thoroughly cleansed. This procedure should be practised daily until the temperature falls to normal and remains at that point. The rationale of the treatment by hydrogen peroxide is that this agent causes a rapid oxidation or super-oxidation of effete organic matter. It initiates and infinitely improves and accelerates the efforts of the human organism to remove offending foreign materials. The advantage of this agent over bichloride of mercury, carbolic acid and other agents that act chemically, is that it is non-corrosive and non-destructive to healthy tissue. Besides, the results obtained from the use of hydrogen peroxide are vastly superior to those obtained by the use of any other agent. G. T. M'K.

Medicine.

. . . IN CHARGE OF . . .
J. J. CASSIDY, M.D., AND W. J. WILSON, M.D.

IS PETROLEUM EMULSION OF ANY NUTRITIVE VALUE?

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THERE can be no doubt that in recent years petroleum emulsion has crept into use as a substitute for cod-liver oil in the case of patients who are unable to take the latter. Now, petroleum belongs to the paraffin series—that is to say, to a set of substances which are characterized by the great opposition they offer to chemical change. One would not, therefore, expect on *a priori* grounds that petroleum would be capable of assimilation in the body. In order to put the matter to practical test I recently carried out some experiments on the absorption of petroleum emulsion by man, the results of which entirely confirmed the suspicions which one had entertained on chemical grounds, and led to the conviction that petroleum is of absolutely no use at all as a substitute for cod-liver oil. It is the object of this paper to describe these experiments and the conclusions to be drawn from them.

I employed a well-known and widely advertised emulsion of exceedingly pure petroleum. It was found that 30 c.cm. of it, when mixed with charcoal and evaporated to dryness, yielded on extraction with ether 7 grams of semifluid petroleum; 30 c.cm. represents about three dessertspoonfuls, which is the usual daily dose of the emulsion in question. I next proceeded to administer this dose to a healthy man with the object of ascertaining how much petroleum one could recover from the feces. In the first experiment the subject was placed on a constant diet containing a moderate amount of fat. The feces were collected daily, mixed with animal charcoal, and evaporated to dryness. The product was then extracted with ether in a Soxhlet's apparatus and the extract weighed. The results are contained in the following table:

FIRST EXPERIMENT.

	Weight of Ether Extract.
Total feces of three days without petroleum.....	7.1 grams.
Total feces of three days on 30 c.cm. petroleum emulsion per day	32.7 "
Difference.....	25.6 "

That is to say, that the administration of three dessertspoonfuls of petroleum emulsion daily had increased the ether extract of three days' feces by 25.6 grams, although the diet was the same as on the three previous days. The appearance of the extract was also quite different for the two periods. That of the three first days was solid and waxy, while that of the three petroleum days was semifluid in consistence.

In order to recover petroleum free from fat the ether extract was saponified by boiling with alcoholic potash solution. The residue was diluted with water, shaken up with ether in a separation funnel, the ether evaporated, and the residue weighed. The total 32.7 grams yielded on this treatment 21.6 grams of semifluid petroleum. Now, 7 grams of petroleum had been administered on each day, so that 21 grams had been given, and 21.6 were recovered. The apparent excess found was probably due to the presence of traces of soaps.

In the second experiment no attempt was made to regulate the diet. Thirty cubic centimetres of the emulsion were administered in one day, and the feces of the three succeeding days extracted with ether, and the extract saponified as above.

SECOND EXPERIMENT.

	Ether Extract.
First day (no petroleum)	3.5 grams.
Second day (no petroleum)	4.1 "
Third day (30 c.cm. emulsion)	4.3 "
Fourth day (no petroleum)	7.6 "
Fifth day (no petroleum)	6.9 "

On saponification, the extract of the fourth day yielded 4.5 grams of petroleum. The extracts of the third and fifth days yielded together 2.6 grams. The total amount of petroleum recovered was thus 7.1 grams, while the amount contained in the 30 c.cm. of emulsion given was 7 grams. The results of this experiment, therefore, entirely confirm those of the first.

From these experiments it may reasonably be concluded that petroleum is not absorbed in the human intestine, and I consider, therefore, that it can in nowise be regarded as a food or a substitute for cod-liver oil.

Nor do I suppose that petroleum has any remote action, say, upon the lungs. It is conceivable that if crude petroleum were employed, some of the volatile substances contained in it might enter the blood and be excreted by the mucous membrane of the air passages, but the purer the petroleum used the less chance is there of any such occurrence.

Whether petroleum may have any value as a local application in intestinal diseases must be left undecided. One can imagine that there may be conditions of the intestinal mucous membrane in which the administration of petroleum might be of value in the same way as the application of vaseline to the skin, by forming a sort of pellicle on the intestinal surface.

In one sense, also, it may be regarded as an artificial intestinal mucus, and it might in that way have some value in certain forms of constipation. It is also worth considering whether it might not be a useful vehicle for the administration of intestinal antiseptics. Carbolic acid dissolves in it, and if the petroleum prevented the absorption of the acid it would also bring the latter into intimate mixture with the intestinal contents, and act as a sort of internal "carbolic vaseline"; but that part of the subject would require special investigation by experiment. My only object at present is to point out that petroleum, even when given in the form of emulsion, is not absorbed at all, and as a consequence can have no nutritive value.—*Brit. Med. Jour.* W. J. W.

THE INDICATIONS FOR THE EMPLOYMENT OF HYDROCHLORIC ACID IN AFFECTIONS OF THE STOMACH.

In his Lyons thesis of 1898, according to the *International Medical Magazine* for December, Perran says that, although hydrochloric acid is already old as a therapeutic remedy for diseases of the stomach, authors are still far from agreeing on the cases in which it should be employed, and, above all, as to the quantity of the drug to be employed. Indeed, while certain clinicians prescribe from fifteen to thirty minims per day, others administer much larger doses. In the work on this thesis Perran describes the favorable effect produced by large doses of hydrochloric acid taken according to the method employed with success by Dr. C. Tournier in his private practice, as also by Dr. Lépine, of Lyons. Dr. Tournier gives hydrochloric acid in the French official dose of from three to four grammes (forty-five minims to one drachm) daily in the following manner: the patient takes fifteen drops of the acid a few minutes after finishing each of the two principal meals, then at the end of half an hour he takes another fifteen drops, and lastly, in certain cases he again takes fifteen drops after an interval of thirty minutes. This method of taking hydrochloric acid is about the same as that employed by Dr. Ewald, who prescribes fifteen drops of the acid three or four times at quarter-hour intervals. However, the hydrochloric acid of the German pharmacopeia contains twenty-five per cent. of the gaseous acid, while that of the French pharmacopeia contains about thirty-five per cent. Tournier therefore employs a larger dose than Ewald. Thus administered the hydrochloric acid would be tolerated and its use prolonged without inconvenience for several months. This medication is indicated in gastric hypochloridia in general, and especially in lienteric diarrhea accompanied by extreme hypoacidity of the contents of the stomach. These patients have very slightly accentuated gastric disorders. One observes neither palpitation nor swelling, neither pain nor flatulence. Gastric movements are preserved and even

exaggerated, and the chemical analysis alone shows that the fault lies in a lack of acid in the contents of the stomach. But there is always a lienteric diarrhea occurring generally after each meal, and this disappears in four or five days under the influence of the acid treatment, although it may have resisted all other remedies. A second group of cases, where the use of large doses of hydrochloric acid produces good results, is found in certain gastric conditions with functional hypochloridia, which may be observed in neurasthenic patients, and shows itself especially in alimentary vomitings with no burning sensations and unaccompanied by soreness. The use of hydrochloric acid in these cases does not fail to control these vomitings. Lastly, this drug is especially useful in cases of gastric catarrh with hypochloridia of alcoholic origin, when the troubles consist more especially of alimentary vomitings, distention, sensation of weight after meals, insomnia, and loss of appetite. The conditions which might constitute a formal contraindication to the use of hydrochloric acid are those in which the gastric troubles are accompanied by a pronounced hyperesthesia of the mucous membrane of the stomach for all acids. It is easy to understand the favorable influence exercised by hydrochloric acid in cases of gastric catarrh in conjunction with hypoacidity; indeed, physiology teaches us that this acid favors the secretion of the gastric juice, the emptying of the stomach, and the disappearance of mucus; further, that it acts as an antiseptic; and lastly, that it is an excitant of the pancreatic secretion. It is, above all, this last property which Tournier invokes in order to explain the curative action of hydrochloric acid in cases of lienteric diarrhea.—*N. Y. Med. Journal.* J. J. C.

MOVABLE KIDNEY.

Dr. Max Einhorn, in the *Medical Record* of August 13th of last year, contributed an article on movable kidney, in which the condition is sketched fully and concisely. As to diagnosis, Dr. Einhorn remarks that its recognition is quite easy, and recommends bimanual palpation in the recumbent position as practised and described by Dr. Hare. After referring to the operative treatment and after citing the opinions of several authorities advocating this method, Dr. Einhorn declares himself decidedly in favor of medical treatment, and gives the following reasons for his views:

"(1) The results of internal dietetic-mechanical treatment are very favorable if the gastric and intestinal symptoms are treated according to modern methods, if attention is paid to promoting nutrition, and, if necessary, the wearing of an appropriate abdominal bandage is recommended.

"(2) As is generally known, very many cases of movable kidney are unaccompanied by symptoms. We find a large percentage of digestive disturbances in patients affected with floating kidney,

because these ailments afford us the opportunity of examining the patient. If we were to examine all healthy persons, it would soon come to pass that digestive disturbances in subjects of floating kidney perhaps do not occur much more frequently than in those whose kidneys are in a normal position. These digestive disturbances in the vast majority of cases, therefore, do not depend upon the movable kidney, but upon general causes; hence an operation upon the kidney would not in the least remove the trouble. Moreover, movable kidney is only one of the manifestations of a general enteroptosis, and suture of the kidney would not remove the ptosis of the other organs.

"(3) The results of nephrorrhaphy are in no respect better than those of rational medical treatment. According to the statistics of Sulzer, the results were unsatisfactory in about one-third of the cases subjected to operative measures; aside from this, there are the risks of the operation, which still has a mortality of two per cent."

That surgeons are in many cases of floating kidney too ready to resort to operative measures is undoubtedly correct, but, on the other hand, that surgical interference is on occasions indicated is equally true. With regard to diagnosis, we are of the opinion that Dr. Charles Noble's method of examining patients in the standing position is, for those surgeons who have not become skilled in searching for movable kidney, the most reliable mode of arriving at an accurate diagnosis. When, however, the medical man has gained sufficient knowledge from long experience, he will in all probability be able to diagnose floating kidney as well with the patient in a lying as in a standing posture.—*Medical Record.*

W. J. W.

The Prevention of Consumption.—Dr. J. G. S. Coghill, writing on "The Prevention of Consumption" in the *Nineteenth Century*, points out that even theoretical scientists have not always held that consumption was a fatal disease. Carswell, the greatest scientific physician of his time, says: "Pathological anatomy has, perhaps, never afforded stronger evidence of the curability of a disease than in the case of phthisis." The *post-mortem* investigations of many observers, both in this country and on the Continent, prove that spontaneous cure of consumption occurs in from one-fourth to one-third of all adults dying after the age of forty years. When the body of the late Emperor of Russia, who died of another and quite different malady, was examined, it was found that the apex of the right lung had, in early life, been the seat of tubercular disease that had run its course unrecognized. An American writer has recently stated that statistics of a large number of necropsies, made during a period of ten years, show that nearly 50 per cent. of the subjects had suffered in a greater or less degree of phthisis.—*Med. and Surg. Rev. of Revs.*

Proceedings of Societies.

TORONTO CLINICAL SOCIETY.

The fifty-third regular meeting of the above society was held in St. George's Hall, Elm Street, on Wednesday evening, April 12th, at 8.30. The President, Dr. Grasett, occupied the chair. Fellows present: Davison, W. H. B. Aikins, J. O. Orr, Badgerow, Parsons, Lehman, W. J. McCollum, Millman, Spencer, Chambers, E. E. King, Rudolf, Boyd, Charles Temple, Small, Pepler, H. B. Anderson, Silverthorn, Bruce, Peters, Nevitt, Trow, Macdonald, Greig, Wm. Oldright, Bingham, Thistle, Primrose, George Elliott, Fotheringham. Visitors: J. F. Uren, W. J. Wilson, H. H. Oldright, King Smith. Nominations for Fellowship: Drs. J. F. Uren and King Smith, by H. A. Bruce, W. H. B. Aikins and H. A. Bruce and G. W. Badgerow respectively.

Nomination of Officers for 1899-1900.

President, Dr. George A. Bingham; Vice-President, Dr. W. H. B. Aikins: Cor. Secretary, Dr. G. Boyd: Rec. Secretary, Dr. George Elliott; Treasurer, Dr. W. H. Pepler. Executive Committee (five to be elected)—Drs. H. B. Anderson, George A. Peters, E. E. King, H. A. Bruce, G. Silverthorn, J. T. Fotheringham, A. Primrose, A. A. Macdonald, W. B. Thistle, B. Spencer and Geo. W. Badgerow.

Cryptorchid.

Dr. John L. Davison read short notes of this condition, and presented the patient, a boy, aged seventeen years, for examination by the Fellows present. He said the literature was rather meagre on the subject, with the exception of Heath's "Dictionary of Surgery." In the first place, regarding the question of supernumerary testicle, that they did exist was a fact, though some authorities say that a third testicle had never been actually proven. When such cases exist there are other marked sexual deformities. The penis was decidedly infantile; the epididymis may be found in the scrotum, though partly developed, and the rest of the testicle represented by a small mass like a pea without any particular structure. In these cases the *vas deferens* may be absent: the secretion cannot reach the urethra. It may be due to delayed descent if the testicle is not found in the scrotum at birth. It sometimes comes down and makes its appearance at puberty, and then there is always a hernia. It may be a question whether the case is one of complete absence of the testicle, an anorchism, or one of cryptorchism.

Dr. E. E. King, in discussing the case, thought it one of undeveloped testicle, and was satisfied he could feel the cord on both sides. On the right side he could make out a mass the size of a small bean. He thinks as the patient grows older the organs will develop.

Dr. Davison further stated in cases of this kind, where the testicle is in the inguinal canal or in the abdomen, if it is pressed upon for any length of time, it is very liable to take on malignant disease.

Dermatitis Herpetiformis.

Dr. Chambers presented a patient in this condition, a woman, between thirty and forty years of age. The name dermatitis herpetiformis, he stated, was first applied to the disease by Duhring in 1884. It is a very chronic disease, and, in fact, almost incurable. Itchiness is very pronounced, and the lesions are always grouped and have an herpetic appearance, being irregular in form. Occasionally you get one case with one kind of lesion and sometimes you get all the lesions together. The disease in this case first made its appearance about fifteen years ago. Previously she had been very nervous, so marked at times that she was unable to walk without assistance. Lesions were on the scalp and on all parts of the body. The patient states the lesions are smaller at the present time than at the commencement of the disease. The lesions are frequently found in groups on the face, neck, trunk and upper extremity, and there is no tendency to symmetrical arrangement. The vesicles increase rapidly in size, but rarely become bullæ. They rupture and moist mucous surfaces form, increase in size, and small vesicles form around the periphery: pustules seldom form. The angular outline to the vesicles is similar to herpes zoster. When the lesions heal erythematous patches remain, and some of these show cicatrices. Itching, burning and pricking sensations are nearly always present, and the patient frequently feels these sensations in parts unaffected by the disease. She can tell the outbreak of a new lesion by pain in the region of the liver.

In answer to Dr. Pepler as to his treatment in this case, Dr. Chambers said he had only had one case before this one. That case got better, but he was not so sure that she did not suffer a relapse. A form of the disease sometimes occurs in pregnancy. As a rule the disease is not fatal, but so far as he knew very few cases have been completely cured. The treatment employed in this case has not improved the patient to any great extent. Morris speaks of antimony. Wine of antimony was being used in this case and it was proving very beneficial. In papular eczema you will find that wine of antimony acts very beneficially. You may use any drug that will relieve the itching, but of course it would be only palliative. Locally in this case he had used 2 per cent. sulphur ointment. The disease is undoubtedly a neurosis and the treatment should be constitutional.

Dr. Chambers also presented two patients with favus, in one of whom the disease had existed for eight years, and in the other, three. The mousey odor was not very well marked in either case.

Multiple Angioma.

Dr. H. B. Anderson presented a boy in this condition, aged fifteen years. In regard to family history, his mother had a few moles on her face, and his grandmother had warts about her neck and face. The patient is strong and robust, with a heavy facial expression and brownish birthmarks on the head and nose, not raised. At about nine months a small tumor appeared in the right lumbar region and has gradually enlarged; and other small tumors on different parts of the body. About six years ago, brownish mottling of the skin appeared, and also on the chest. At times they become red. The surface of the larger ones is covered with fine hair; one on the shoulder has an uneven surface, easily indented. All have wide bases, and there are many nodules felt, invisible to the eye. The left breast is diffusely enlarged, the lower ribs prominent and bulged outwards, and a deep depression is seen in the lower sternal region. The condition appears to correspond more to molluscum fibrosum with brownish pigment moles and enlarged sebaceous glands, some of them being vascular enough to suggest an angiomatous condition. Microscopically, Dr. Anderson thinks the tumors would show fibrous tissue with dilated blood spaces. Some authorities say they really rise in the connective tissue of the nerve sheaths. That is the view generally held at the present time. In some cases there have been as many as three or four thousand covering all parts of the body. Others classify these under fibrous tumors, but Senn says they are infective. They are as a rule congenital, being present at birth but continue to grow afterwards for a considerable length of time. As to prognosis, they undergo involution in some cases. Most frequently after attaining a certain size the tumors become stationary. In some cases they may take on a sarcomatous condition and grow very rapidly. Defective mental development is usually found present, and there is also a tendency to deformities in different parts of the body. Dr. Anderson thought the neurotic origin was shown.

Vesical Calculi.

Dr. Grasett exhibited two vesical calculi, one of which was of a peculiar elongated shape, slightly curved and about two inches in length. The first was from a man of twenty-five or thirty years. There was no previous history of any renal attacks. The patient stated that last spring, without any of the ordinary causes that might produce cystitis, he was attacked with that disease. When first seen by Dr. Grasett he had an acute exacerbation with temperature elevated to 102 degrees. After the subsidence of the fever he was sounded, and a stone immediately found without any diffi-

culty. His physician in Japan had never sounded, although he had been under his care in the hospital there for some time. In the patient who had the stone of peculiar shape, prostatic abscess had been at first diagnosed. Dr. Grasett stated that he had tried lithotrity in this case, but could not crush on account of not being able to get the stone into the instrument. He described further how the stone had been removed by the lateral operation. It was partially encysted, and occurred in a young man of some seventeen years.

Double Amputation of Both Arms at the Elbow-joint.

Dr. George A. Peters showed three specimens in which injuries of the forearms and hands necessitated amputation at the elbow-joint. Two of the specimens were from one patient, a young man nineteen years of age, the result of a railway injury in which both arms were crushed by the wheels. The right arm was removed soon after the injury. The patient begged very strongly to have the other saved, and the surgeon promised not to do an amputation that night, until his friends arrived. The right arm shows double fracture of the radius and ulna, the ulna being comminuted. The radius was broken about the junction of the lower and middle third of the bone. The epiphysis is completely separated from the shaft, and there is also compound dislocation at the wrist-joint. In regard to the right arm the skin was torn very badly. The surgeon was able in this case to amputate below the elbow, near to the joint, and get a very good flap of skin, and it healed by first intention. On the other arm the fracture was evidently not nearly so severe. The only injury to the skin were two openings. The point he wished to make with regard to the degree of injury to the skin, is this, that in the left arm where the injury to the skin was less than in the other, the skin had been torn away from the muscles to a much higher level. The skin was dragged away from the muscles beneath, and was separated to a point above the elbow. In this arm he could not amputate below the elbow-joint. He tried first, but found he had to remove it at the elbow-joint. Even after that a portion of the skin sloughed and has since healed by granulation, so that he has a fairly good stump on that side now. The rule in regard to the amputation of such cases has been very forcibly exaggerated by Mr. Cheyne, of Edinburgh. He says that in these cases of crush from heavy machinery, the rule should be to amputate above the part that you think will recover. The circulation in the left arm was excellent, with all the degree of fracture and tearing of the muscles, tendons, etc., and the nerves were intact and the patient could feel all over that hand. There was no coldness and you could feel the pulse at the wrist; and yet under anesthesia, the surgeon found that the skin was entirely separated and there was a great degree of laceration of muscles. Is the circulation all right? Can the hand survive? Are the nerves all right? In both, these were

present. It is quite possible the hand might have lived, but it would have been useless. The hand would have been stiff and a club on the end of his arm, and would have been useless. Another thing: during the process of recovery, provided one made an attempt to save the arm, one runs a great danger of sepsis and risk to life. The left arm Dr. Peters amputated the next morning after the condition was found, under anesthesia.

The other case exhibited by Dr. Peters was the removal of the arm below the elbow-joint in an electrical machine. Thinking the current was turned off, the electrician had passed his hand into the box or cylinder to perform some adjustment, when the piston came down and cut his arm off cleanly. It was as evenly cut around as the end of a cuff. The skin had retracted some when seen by the surgeon. In this case Dr. Peters amputated high up and just saved the elbow-joint. He first stitched the skin over the end of the stump in several directions, and then proceeded to do a circular amputation, and in that way he was able to go close to the elbow-joint.

In regard to efforts to save the elbow-joint, it is important to save the attachments of the muscles which pass down from the arm to the forearm, viz., the triceps, biceps, anconeus and brachialis anticus.

Injury of the Forearm.

Dr. Nevitt showed a patient, a man about forty-five to fifty years of age, who had sustained an injury to the forearm with a considerable degree of laceration, and yet with good circulation through the vessels in the hand. The injury was a machine accident, and consisted of a compound dislocation at the elbow-joint, and a double or a multiple compound fracture of both bones of the forearm. At first sight nobody would have said a word but that the arm must come off. When the elbow was reduced it looked very presentable, and, finding the circulation good, Dr. Nevitt determined to try to save it. The injury to the bones of the arm was very considerable, and also the injury to the muscles. Exactly what the injury was, he was not prepared to say. The patient was here presented to the Fellows, and Dr. Nevitt said the condition of the hand and arm is there to show for itself, and the question is whether that is as good as an artificial arm.

Dr. Bruce, who had charge of the case during the illness of Dr. Nevitt, supplementing the data already given, said, four weeks after this accident was received, Dr. Nevitt had asked him to look after the case. At that time there was a sequestrum found, although it was present at the time of the accident. This sequestrum was about one and three-fourth inches in length and was pressing between the ends of the bones. The upper fragment of the ulna was bent over towards the lower fragment of the radius, and if united in that way there would be no movement in the arm; everything would unite in a mass. Dr. Bruce took a small

section out of the radius and wired the bones into position so that the two fragments of the radius would be in contact with each other—and the fracture was oblique. At the time of making the incision, a mass, almost the size of one's fist, issued out through the incision, and this seemed to be pulpified muscle with some old organized blood clot. When that occurred, the anterior surface of the radius appeared. At least three-quarters of the flexor muscles of the forearm were entirely destroyed. There were no muscles to act upon the tendons lower down. The tendons could be seen at the lower part with no muscles attached above. The sequestrum was a piece of bone broken off at the accident and not a piece which had sloughed off.

Drs. Wm. Oldright, E. E. King, A. Primrose, President Grasett, A. A. Macdonald, Thos. Hillman and George A. Bingham participated in a very animated and interesting discussion of the cases.

Replying to the criticisms Dr. Peters said, in reference to the left arm, no one would deny that the skin would slough. The bones are gone and all the extensor tendons are gone. Some of the flexors are left. The tendons are there but the muscles are crushed, while the veins remain patent throughout, through the sloughing area; and in the meantime the man's life is in danger every moment. The mortality is much greater where amputation is not performed. Dr. Peters had no doubt in his own mind that the hand would have become gangrenous in the course of a few days, although the circulation was so good at the time. When swelling occurred the inflammatory exudate would have choked the veins, and in a very short space of time the arm would have been gangrenous.

The discussion was adjourned until the next meeting in May.

GEORGE ELLIOTT, *Recording Secretary.*

THE INTERNATIONAL ASSOCIATION OF RAILWAY SURGEONS.

INTERNATIONAL Association of Railway Surgeons meets at Richmond, Va., May 31st, June 1st and 2nd, 1899. The Executive Board of the above Association met at St. Louis a short time ago with President Bruce L. Riordan, of Toronto, presiding, and decided on the place of meeting.

One of the features of the coming meeting will be a symposium on scalds and burns—the subject being taken up under the following headings:

(*a*) Pathology of Burns and Scalds, by Dr. J. Alex. Hutcheson, of Montreal.

(*b*) Primary Treatment of Burns and Scalds, by Dr. Herbert Bruce, Toronto.

(*c*) The Secondary or After Treatment of Burns and Scalds,

including Skin Grafting, etc., by Dr. J. B. Murphy, of Chicago, and Dr. Loebe, Chicago.

(*d*) The Complications of Burns and Scalds, by Dr. F. J. Lutz, St. Louis.

(*e*) The Prognosis of Burns and Scalds—reader not named yet.

A large number of papers have been promised by surgeons—members of the Association—including papers on Sanitation of Railway Carriages and Buildings, by Dr. Conn, of Concord, N.H., and a paper by Dr. C. R. Dickson, of Toronto, on Ambulance Training for Railway Employees.

Dr. Brock, Chief Surgeon of the Chesapeake and Ohio Railway, is Chairman of the Local Committee of Arrangements, at Richmond, Va., and has, as his able assistants, such men as the past President, Dr. George Ross, and Drs. Hugh Taylor and White, of Richmond.

The headquarters of the Association will be the magnificent Jefferson Hotel. Various social entertainments have already been arranged, including trips to Old Point Comfort, Va., and White Sulphur Springs, W.Va.

The date of the meeting of the International Association of Railway Surgeons was placed so as to give the members an opportunity of attending the meeting of the American Medical Association which commences at Columbus, Ohio, June 6th.

The President intends to give special attention in his annual address to subjects which are of prime importance to Railway Surgeons, such as sanitation and measures to be adopted to prevent spread of contagious diseases along transportation lines; ambulance training for railway employees so as fit them in rendering "first aid" in cases of injury and other emergencies, and a description of the various systems adopted by railway corporations for the relief of injured employees or passengers.

The officers of the Association are as follows: President, Bruce L. Riordan, Toronto, Can.; Vice-Presidents, R. E. L. Kincaid, Bonham, Texas, U.S.A.; James G. Hunt, Utica, N.Y., U.S.A.; John L. Foxton, Huron, S.D., U.S.A.; W. Gunn, Clinton, Ont., Can.; E. J. McKnight, Hartford, Conn., U.S.A.; C. F. Leslie, Clyde, Kansas, U.S A.; Hugh M. Taylor, Richmond, Va., U.S.A.; Secretary, Louis J. Mitchell, Chicago, Ill., U.S.A.; Treasurer, Eugene R. Lewis, Kansas City, Mo., U.S.A.; Chairman Executive Board, Frank J. Lutz, St. Louis, Mo., U.S.A. Dr. Middleton, Chief Surgeon Chicago, Rock Island and Pacific Railway, is Chairman of Committee on Transportation, and Dr. C. W. P. Brock, Chairman of Committee of Arrangements at Richmond, Va.

A History of the Case Essential.—*The Doctor's Factotum* for March and April quotes the following from *Puck:* "A man must not only have a fractured skull but a clear and coherent explanation of how he came to get it before he is admitted to a New York hospital."

The Canadian Journal of Medicine and Surgery

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Medical Jurisprudence and Toxicology—N. A. POWELL M.D., Toronto, and W. A. YOUNG, M.D., L.R.C.P. Lond., Toronto.

Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, Resident Physician Toronto Asylum for the Insane.

Public Health and Hygiene—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon Toronto General Hospital; and E. H. ADAMS, M.D., Toronto.

Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S.Eng., Toronto.

Physiology—A. B. EADIE, M.D., Toronto, Professor of Physiology Woman's Medical College, Toronto.

Pediatrics—AUGUSTA STOWE GULLEN, M.D., Toronto, Professor of Diseases of Children Woman's Medical College, Toronto.

Pathology—W. H. PEPLER, M.D., C.M., Trinity University; Pathologist Hospital for Sick Children, Toronto; Demonstrator of Pathology Trinity Medical College; Physician to Outdoor Department Toronto General Hospital; Surgeon Canadian Pacific R.R., Toronto.

Laryngology and Rhinology—J. D. THORBURN, M.D., Toronto, Laryngologist and Rhinologist Toronto General Hospital.

Ophthalmology and Otology—J. M. MACCALLUM, M.D., Toronto, Assistant Physician Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

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Editorials.

FRUITS WHICH LESSEN THE FORMATION OF URIC ACID.

CHEMISTS tell us that hippuric acid is excreted by herbivorous animals in large amounts. Witthaus says (p. 327): "In human urine, with normal food, it exists in small quantity; with a purely vegetable diet its elimination is greatly increased, as it is also after the administration of benzoic acid, and to a less degree in diabetes and chorea. The amount of hippuric acid eliminated under

normal circumstances by man varies from 0.29 gram to 2.84 grams in twenty-four hours."

The words "normal circumstances" used by Witthaus would lead one to think that the ingestion of a certain proportion of vegetables or fruits along with a daily ration of animal food was what he meant, because if vegetables or fruits should not be added to what might, for convenience, be called a "normal diet," then the excretion of hippuric acid would be very small or of no account. For instance, in the experiments made on himself by Dr. Weiss, and detailed in Hoppe Zeyler's *Zeitsch fur Physiolog. Chim*, 1898, the normal diet consisted of meat, bread, butter, water, salt water and sugar. On the days when this normal diet only was used by the experimenter he excreted no hippuric acid, but on the days when fixed weights of fruits were added to the normal diet a notable amount of hippuric acid was excreted, and the amount of uric acid was relatively lowered. The experiments are as follows:

		Urine.	Uric acid.	Hippuric acid.
First experiment.	Normal day	1340 c.c.	0.7204 gr.	0.000 gr.
" "	1½ lb. cherries	860 "	0.3903 "	0.3622 "
Second "	Normal day	1256 "	0.7215 "	0.0001 "
" "	1 lb. good strawberries	1020 "	0.5320 "	0.5110 "
Third "	Normal day	1850 "	0.8500 "	0.000 "
" "	1½ lb. dried cherries..	1725 "	0.4614 "	0.000 "
Fourth "	Normal day	1805 "	0.6877 "	0.000 "
" "	2 lbs. grapes	2200 "	0.5580 "	0.6917 "

In the last experiment the berries of the grapes were swallowed in their envelopes. Beside the diminution of uric acid, in all the experiments there was a notable increase of hippuric acid on the days when the experiments were made, whilst on the normal days the quantity of hippuric acid was imponderable. Is there something in fruits which brings on this change? To ascertain what it might be, new experiments were made, in which bitartrate of potassium, tannin, sugar and quinic acid were added to a uniform diet. An increase of hippuric acid followed the ingestion of quinic acid, a fact of some importance although the exact quantity of this substance in fruits is hard to make out. Its presence in the green-gage plum, which has been described by Harten, probably accounts for the dietetic value of that fruit.

The importance of these experiments of Dr. Weiss is due to the fact that they show clearly the influence of well-known fruits in balancing the evils of a nitrogeneous diet. Excess in food is always

bad, but excess in animal food is worse than excess in vegetable food, especially when combined with sedentary habits. Persons who use a highly animalized diet, and do not take free exercise, are certain to suffer sooner or later from the defective oxidation and elimination of the nitrogeneous products of disintegration. These products accumulate in the system, and thence impair the performance of the functional operations of life. Some of the phenomena of gout, for instance, are observed in persons who, without being guilty of excess in eating or drinking, still suffer from a defective metamorphosis and retention of nitrogeneous products within the system.

To change altogether from a diet containing a large quantity of animal food to a diet made up principally of vegetables or fruits would be difficult in Canada. Here nitrogeneous matter must be provided if vigor and nutrition are to be preserved in full force; hence a diet into which animal food enters largely—a diet that is rich in nitrogeneous matter—is universally used in this country, and, if surrounded by the proper conditions, tends to increase tissue formation and the development of a high state of bodily health and strength. Conjoined with sedentary habits, however, different results are observed, with which the members of the medical profession are quite familiar. To obviate the production of these disordered actions of the system it would be well for those who are compelled to lead sedentary lives, and yet are unwilling or unable to adopt vegetarianism, to lessen the quantity of animal food which they consume, and to take with their ordinary diet a suitable quantity of those fruits, such as cherries, strawberries or grapes, which lessen the excretion of uric acid. There is authority also for this view, for Wöhler has shown that the cherry cure is renowned in the treatment of gout, and the celebrated Linnæus freed himself from the gouty diathesis, from which he had suffered many years, by employing the strawberry cure.

The green-gage plum, which has a particular power to convert uric acid into hippuric acid on account of the quinic acid it contains, grows well in Ontario. It is used extensively as a preserved fruit, and is instinctively relished by most people. The sugar used in preserving fruit, though objectionable to some people, is serviceable to those who suffer from constipation. If preserved fruits are objectionable, grapes are available, though it must be confessed that the quantity of native sugar in the grape is considerable. A kilogram of grapes (two pounds three ounces)

contains about six grams of albumen and 150 grams of sugar. Grapes are diuretic, and in many cases slightly purgative. In looking over the experiments made by Dr. Weiss it may be noted that an increase in the quantity of urine voided was observed when grapes were used, the contrary being noted when cherries or strawberries were eaten. Dujardin-Beaumetz considers that grapes are useful in the treatment of atonic dyspepsias, particularly those accompanied with constipation, such as are observed in gouty subjects or those afflicted with abdominal plethora or hyperemia of the liver. J. J. C.

CHRISTIAN SCIENCE VS. POLYPHARMACY.

In the days of Hahnemann it was said that patients became converts to the new system of small pills and attenuated dilutions in order to escape from the big pills and robust mixtures of the regular school. Whether it be true or false, this saying gives a clue to the trend of thought among civilized races, who, even in matters concerning health and life, demand evidences of refinement as well as strength and utility. Such a manner of thinking naturally presupposes that a patient believes more in the efficacy of his own petty fancies than in the merits of the drugs he takes. As indicative of a different way of looking at the taking of medicine, it is said that an Ottoman's estimate of the value of the potion he swallows depends on the pungency of its odor and the nauseating quality of its taste.

To cater to a change in public taste, the American pharmacist has striven to rescue his output from the opprobrium of nastiness or unsightliness, and with such success that some of his preparations are positively enticing. The modern allopath can therefore meet his rival on almost even ground, the principal divergence between them being that the allopath gives his patient something nice and the homeopath gives him nothing to speak of.

Some there are, however, to whom even a sugar pill is an *embarras de richesse*—people who, in matters of religion, have drifted about seeking comfort in theosophy, spiritualism, and kindred delusions, and in medicine have conformed to the views of Mrs. Eddy, who teaches that, by the operation of some mental influence, patients can be healed of their distempers.

As a proof of this we notice that on Easter Sunday a letter from Mrs. Eddy was read in the Christian Science Church at

Toronto, in which the founder of the sect contends that the metaphysical practice of medicine not only equals, but surpasses the materia medica in curing the worst forms of *contagious* or *organic diseases*. If the truth of these assertions could be demonstrated, there would be no doubt of the success of Christian Science, and instead of one there would soon be many churches of that cult in Toronto. In the meantime, until public opinion crystallizes on its merits, the success or failure of this new medico-religious cult is in the hands of the devout female sex, who form the strength of this, as well as of most other churches in Toronto. Of the ladies we may say that we have sufficient confidence in their good sense, penetration, and promptitude of action to believe that they will abandon the cult without ceremony, as soon as it proves to be a cunning device to thrive on their credulity. With regard to the influence of drug-taking in helping to push public opinion into a position of hostility to medicine, the physician should examine his conscience and ask himself if he has been blameworthy. It will perhaps occur to most of us that in the matter of taking medicine the female sex has done its full share. Would it not be well to reflect before we commit ourselves to the healing merits of a pill or a mixture? Our skill is measured by the success or failure of what we order. If the case calls for mechanical treatment, why try internal medicines, and *vice versa?* If careful dieting and bathing are of most importance, as in a disease which, like typhoid fever, runs a definite course, why use the deadly antipyretic? In reference to the last Dr. Simon Baruch has well remarked: "The chief advantage of the medicinal antipyretics seems to be that their use enables the patient to die with a fairly normal temperature." Then there is the polypharmacy, contingent on the contagious diseases of childhood, on phthisis pulmonalis, respiratory and intestinal diseases, and others, which provide a great portion of the work done by the medical practitioner. Have we helped to swell the ranks of Christian Science by injudicious prescribing? Have we neglected the careful study of the applications of bathing, massage, electricity, rest, careful dieting, recreation, sunlight and ventilation in the home and workshop, and many other physical influences helpful to the organism, and have we pinned our faith to a label? If so, let us retreat before it is too late. To practise medicine rationally one must study chiefly the *modus operandi* of the causes of disease, and, reciprocally, the reactions of the organism. A careful study of modern advances in etiology, pathogenesis, and

pathological physiology should antedate medical practice. Symptomatic medication suffices for urgent cases; but treatment applied to the real cause of a malady is by far more reasonable. This, too, may fail, as when an affection of an internal organ results from an antecedent disease.

But in all the cases which we may meet in the wide domain of human ills, while giving to modern pharmacy its real due, we should not put the servant before the master, and, conscious of the instability of human faith, we should remember that, no matter what our therapeutic methods may be, the best treatment for any disease is a good physician. J. J. C.

DOMINION REGISTRATION.

During the last few months a good deal has been done in connection with this important matter. Dr. Roddick, through his position at Ottawa, and with a never-failing desire to bring about this needed result, has spent a great deal of time and energy in looking up and discussing with high authorities the various legal aspects of the question.

A few years after the formation of the Canadian Medical Association, a movement was set on foot to bring about a system of Interprovincial Registration. This seems to be impracticable, because of the difficulty of arriving at a suitable basis of agreement, and also because of a feeling that while "requirements" may appear the same on paper, yet in reality aspirants for qualification may find it much easier to qualify in one province than in another. Nor could the other provinces ever agree to the continuance of the present system of examination as carried out in the Province of Quebec.

It would therefore seem that the only possible means of bringing about a better understanding between the provinces is by establishing a Central Licensing Board. While matters of education were relegated to the provinces by the British North America Act, yet by Sec. 91, of the Act, it seems that the Dominion Parliament has power to make laws "for the peace, order and good government of Canada, in relation to all matters not coming within the classes of subjects by this Act assigned exclusively to the Legislatures of the Provinces." It would seem that the bringing about of a uniformity of medical education could come under this head,

and it certainly is impossible for the provinces to form a Central or Dominion Board, for their duties are confined exclusively to their own province.

Let it be called a Dominion Medical Board, composed of medical practitioners from each of the provinces, and from the N.-W. Territories, having power to appoint examiners and to hold examinations at such time and place as the Board may determine. As an educational standard, to begin with, it might adopt with safety the plan as laid down by the Canadian Medical Association of 1898—ever striving to keep that standard equal to, or even higher than, that demanded by any of the provinces.

As yet, of course, nothing definite has been or can be done until all of the provinces, through their councils, have pronounced upon the scheme, in order that there may be a certain uniformity of feeling throughout the Dominion. One of the objects of this article is to elicit discussion and to obtain information as to the best method of proceeding, in order that we may obtain a system of Dominion registration that will be satisfactory to all, and by means of which the best results may be accomplished.

"IS IT CHRISTIAN? IS IT SCIENCE?"

"To all humanitarian physicians, yea, to all who up to their highest light are ministering to human suffering, the Christian Scientist bears cordial good-will and respect for the motives, if not for the means employed." Such were the condescending words employed by an itinerant lecturer upon Christian Science recently in Toronto. About any form of *religious* belief or worship we have nothing to say as a medical publication. We leave all "error" to the tender mercies of the clergy, but when a so-called form of religion, or rather a sect, is not content with its own province, but seeks to add a "side line" (we use this current commercial term advisedly) by which "mental treatments" are exchanged for dirty material dollars, ought not physicians to utter a strong protest? The text of the lecture above referred to was published in one of the daily papers, but some of the stories that this orator (?) told at the expense, as he thought, of the ethical gentlemen who compose the rank and file of the medical profession, were omitted, we noticed, from the lecture-text published. One of these tid-bits was about a maiden, a tennis maiden. Alas, a painful accident deprived her

of several of her front teeth; she believed they had been forced down her pharynx into her stomach; she became violently ill. A physician was called. After careful examination, he, concurring in her belief, prescribed. Presently a friend stepped inside and said: "Here are your teeth, I found them on the lawn"!! Poor old story, its days have been many. Did it not make its *debut* as a "pickin" from *Puck*. Now another, patient reader, culled from the lecturer's little bouquet of evergreens. A physician joined the ranks of the Christian Scientists (so the story goes), but did not give up his practice, but treated his trusting patients with bread pills. His practice grew, and many were the victims of this "gay deceiver." If this be true, what a slur it is on the honor of the whole body—oh, pardon—sect, of Christian Scientists, to think that it would harbor in its bosom of *truth* and *perfect goodness* a hypocrite so contemptible! To physicians, especially, this sect appears inconsistent; they profess to follow or imitate the Great Physician in their power to heal one another, and yet disclaim all material suffering. In such a hurry are they to become little mental tin gods and to rearrange humanity, that they forget the Great Physician walked this earth for thirty years. Nothing material, do they say? All mind, nothing matter? *Thrust forth thy hand, Thomas, and feel the nail-prints.* The followers of the Christian Science cult have been estimated as being 2,000,000. What a pity their lecturers and promoters seem to have infinite time, and that so many apparently sane persons have taken their vow renouncing forever Materia Medica, bowing in allegiance to such leaders and sitting at the feet of such lecturers, to learn words of wisdom, forsooth! Some one said that at first even Balaam mistook the voice he heard and thought an angel conversed with him. All the same, it was the ass who spoke. W. A. Y.

WHY IS VACCINATION NEGLECTED IN ONTARIO?

Thanks to the genius of the immortal Jenner, smallpox, one of the greatest scourges which has ever afflicted the human race, has become much less frequent in civilized countries than it used to be a century ago. In some countries it is so rare that, in the opinion of German authors, it is no longer observed in really civilized countries, and may soon be considered an infection which will possess a purely historic interest. So far this happy desideratum

cannot be recorded of the United States, in which over three thousand cases occurred during the past year. In Quebec no great epidemic has arisen since 1885. Since that memorable year only trifling outbreaks have occurred in Ontario. During 1888 and 1889 there were a few cases; from 1890 to 1894 there were none. During 1894 and up to February, 1895, there were 17 outbreaks and 35 cases. In 1897 two cases were noted in Toronto. From September 30th, 1898, up to April 10th, 1899, there were 45 cases, with 11 deaths, occurring in 10 municipalities of this province. In no instance, however, was the disease allowed to extend from an infected to a non-infected house. At present there is no case of smallpox in Ontario. In view of the danger which threatened at the end of last year and the beginning of the present year, the Provincial Health Department issued a circular, dated February 1st, 1899, to the local boards of health, urging the need of providing means and taking measures for a general vaccination of school children and other unvaccinated persons.

The following is a summary of the replies received up to April 11th, 1899:

Municipalities reporting general vaccination	30
" " vaccination of school children	8
" " some, but not a general vaccination.	11
" " no action taken or action deferred	20
" " a refusal to take action	4
Total municipalities reporting	73

It is quite likely that some municipal boards of health may have been doing good by stealth, and have refrained from publishing their statistics. Still, when one reflects that there are 570 local boards of health, 480 medical health officers, and a population of 2,283,182 in Ontario, the paucity of the replies shows that little interest is taken in vaccination by the municipal health authorities, and that the people are either indifferent, or even opposed, to the practice. One might even say that an arm made sore by vaccination had greater terrors for the average man than variola itself with all its horrors.

Immunity to smallpox can be purchased by an individual only by having that disease, or by vaccination. Let us hope, therefore, that, without reference to any action taken, or to be taken, by boards of health, practitioners will make it a duty to induce their clients to be vaccinated. Indeed, smallpox is so detestable a plague

that both the profession and the public should unite to exterminate it. We feel confident, from the study of sound statistics, that if vaccination and revaccination are systematically performed in Ontario, the people will soon be placed in a position of actual immunity to smallpox, which, for them, would then possess a purely historic interest.

What is wanted in vaccine virus is pure vaccine without hurtful microbes—such as staphylococci or streptococci. Competent authority asserts that glycerine prevents the growth of the hurtful microbes, but does not impair the energy of the vaccine. Glycerinated vaccine virus, prepared under aseptic precautions, is, therefore, free from the objections urged against bovine virus put up on points. Some of the objections are that the hurtful microbes, present in vaccine put up on points, cause inflammation of the skin, even erysipelas and long-standing ulcers. Hence the necessity of aseptic precautions in preparing and storing the vaccine.

Logically, however, freedom of the vaccine from hurtful microbes will not suffice if the same microbes are present on the skin of the person to be vaccinated, or on the scalpel or fingers of the operator. While absolute sterility of the skin may be difficult of attainment, still an effort should be made to obtain it, for in microbe warfare, as in other battles, numbers tell, and so unclean arms and unwashed fingers increase the chances of bad results from vaccination. Since the manufacturer has prepared an aseptic vaccine, the physician should continue the good work by using it with aseptic precautions. When this rule is generally followed, we shall hear less of sore arms and other drawbacks, which have been ascribed to bad vaccine or bad methods of doing vaccination.

J. J. C.

THE LATE DR. JOSEPH O'DWYER.

A COMMITTEE of over forty physicians, representing sixteen different medical societies of the city of New York, and including representatives of both schools of medicine, has been formed for the purpose of doing honor to the memory of Dr. Joseph O'Dwyer. The first meeting was held at the New York Academy of Medicine, November 22nd, 1898, under the chairmanship of Dr. J. D. Bryant, and was mainly devoted to organization. Dr. Geo. F. Shrady was elected permanent Chairman, and Dr. Alfred Meyer permanent Secretary, and the following Committee on Scope and Plan was

appointed: Dr. Dillon Brown, Chairman, and Drs. Robert Abbe, R. G. Freeman, L. Emmet Holt and Louis Fischer. At the second meeting held at the Academy of Medicine, March 13th, 1899, the report of the Committee on Scope and Plan was adopted and now only awaits final action of a meeting of the full committee. The memorial to Dr. O'Dwyer will probably take an educational form, for by the plan now outlined it is proposed to raise a fund of $30,000, the interest of which shall support two O'Dwyer Fellowships in Pediatrics, open to competition by physicians who graduate in the United States, and to be held by the successful competitors for a period of two years. During this period they must furnish satisfactory proof of their engagement in original research work to a committee of five, one of whom shall be appointed by the President of Harvard University, one by the Dean of the Johns Hopkins Medical School, one by the Provost of the University of Pennsylvania, one by the President of the University of Chicago, and one by the President of the New York Academy of Medicine. Many details of this general plan are still to be arranged, which it shall be the agreeable duty of the Secretary to furnish to the medical press of the country so soon as they are finally decided. This preliminary notice has for its object merely to acquaint the profession with the fact that a movement of this nature is on foot, and that an effort will be made to give it the international character so fitting as a memorial to an investigator of international reputation.

MR. ZIELINSKI'S REGISTRATION CASE.

As there has been a certain amount of misunderstanding as to this matter, the following letter of Dr. A. McKay to the Registrar of the Ontario College of Physicians and Surgeons, will serve to explain it, and show just what the Legislature consented to do herein:

Re Zielinski.

Dr. R. A. Pyne, Registrar, Toronto.

Dear Sir,—As the matter of Zielinski's registration has been before the Private Bills Committee now for some time, I wish to call your attention to the fact that Mr. Zielinski appeared personally before the committee and got a good deal of sympathy owing

to his age. He has now been practising somewhere in the neighborhood of forty years the eclectic system of medicine, and is also armed with a very strong certificate as to his capabilities from Dr. P. D. McLean, of Woodbridge, Ont. As you know, the Private Bills Committee consists of some 72 members, which is a large majority of the House, and I may say that they favor his application to a very large extent. I have succeeded, however, in arranging a compromise that I think will be satisfactory. It is simply this, as the bill will show, that Zielinski is to be permitted to practise the eclectic system of medicine in Ontario as he has done for the last forty years, and the penal clauses of the Ontario Medical Act are not to apply to him in so doing. He is not, however, authorized to practise midwifery or surgery, and if he does, can be prosecuted. This does not give Zielinski registration, but practically leaves him just where he has been, and I think it is the safest way out of the difficulty, otherwise they might insist upon registering him and giving him all rights as enjoyed by members of the profession.

I trust this will be satisfactory to the Council. The members of the Council with whom I have come in contact seem to think it a good solution of the matter.

Believe me, yours faithfully,

A. McKay.

EDITORIAL NOTES.

The Harold Frederic Case.—Despite the storm of indignation aroused by the lamentable death of the late Harold Frederic, the Christian Scientists, who delude themselves, and unfortunately others, into believing that disease can be cured and impending death averted by some occult influences working in defiance of the known laws of physic and physiology, are as mendacious as ever. As was to be expected the astonishing way in which the prosecution in the Frederic case was suddenly dropped by the Treasury, has led the Christian Scientists to believe that they are countenanced by the authorities, and that they have nothing to fear from the law in this country. Posing as martyrs, and as representatives of an inspired faith, they continue to impose upon the credulity of the weak-minded of both sexes, greatly to the pecuniary advantage of the "healers." Knowing something of the influence that was brought to bear in quashing the proceedings in the Frederic case,

it is gratifying to find that the ignorant pretensions of the Christian Scientists, and the blasphemous gabble contained in their "text-book," have been appraised at their true worth by so keen a critic as Mr. W. H. Mallock, who, in a contribution called "The Comedy of Christian Science," which appears in the March number of the *National Review*, exposes this mischievous form of hysterical insanity, which has already cost the world so many valuable lives. The article takes the form of a critical examination of the book entitled "Science and Health," by Mrs. Mary B. G. Eddy, by which the craze is disseminated. Mr. Mallock, by his able exposure of the true inwardness of this amazing farrago of pernicious nonsense, has added another to the many public services which he has already rendered. It is unfortunately true that a very large number of well-to-do people, especially in London, are allowing themselves to be led astray by the ridiculous claims of these self-styled "Scientists," and the sooner a check is put upon the movement, the better for the sanity and well-being of society. We trust, therefore, that a large number of medical men will not only find time to read Mr. Mallock's denunciation of the impostures practised by these ignorant "healers," but they will also assist in calling public attention to the absurdity of the doctrine of the so-called Christian Scientists.—*Med and Surg. Rev. of Revs.*

The American Medical Association will hold its fiftieth annual session at Columbus, Ohio, on Tuesday, Wednesday, Thursday and Friday, June 6, 7, 8 and 9, 1899, commencing on Tuesday at 11 a.m., under the presidency of Professor Joseph McDowell Mathews, M.D., LL.D., of Louisville, Ky. Orations will be delivered as follows: On Medicine, Jas. C. Wilson, Philadelphia: on Surgery, Floyd W. McRae, Atlanta, Ga.; on State Medicine, Daniel R. Brower, Chicago. Chairman Committee of Arrangements, Starling Loving, Columbus. The officers of sections are: Practice of Medicine, Frank Billings, Chicago, chairman: Carroll E. Edson, Denver, secretary. Surgery and Anatomy, W. J. Mayo, Rochester, Minn., chairman: M. L. Harris, Chicago, secretary. Obstetrics and Diseases of Women, A. H. Cordier, Kansas City, Mo., chairman: W. D. Haggard, Jr., Nashville, Tenn., secretary. Materia Medica, Pharmacy and Therapeutics, Thomas H. Stucky, Louisville, Ky., chairman; Leon L. Solomon, Louisville, Ky., secretary. Ophthalmology, Casey A. Wood, Chicago, chairman; Charles H. Williams, Boston secretary. Laryngology and Otology, Emil Mayer, New York, chairman; Christian R. Holmes, Cincinnati, secretary. Diseases of

Children, Henry E. Tuley, Louisville, Ky., chairman; L. D. Boogher, St. Louis, secretary. Physiology and Dietetics, J. Weir, Jr., Owensboro, Ky., chairman; Lee Kahn, Leadville, Colo., secretary. Neurology and Medical Jurisprudence, Frederick Peterson, New York, chairman; Hugh T. Patrick, Chicago, secretary. Cutaneous Medicine and Surgery, W. T. Corlett, Cleveland, O., chairman; J. M. Blaine, Denver, Colo., secretary. State Medicine, Arthur R. Reynolds, Chicago, chairman; W. P. Munn, Denver, Colo., secretary. Stomatology, George V. I. Brown, Milwaukee, Wis., chairman; Eugene S. Talbot, Chicago, secretary. Wm. P. Atkinson, permanent secretary.

Bureau of the Medical Press.—It has long been a subject of comment that the medical journals were slow to appreciate the advantages and benefits to be derived from a representation at the National and State Medical Society meetings, and, indeed, exhibiting an indifference in reporting the proceedings. The fact that a half-dozen journals are rarely seen at the meetings of the American Medical Association, surely reflects little credit upon the enterprise of our medical publishers. It seems, however, to have an explanation in the matter of expense. Unless the publisher or editor has the leisure time to attend the meeting himself, it is difficult to secure a representative who will do justice to the publication, to say nothing of the expense of sending him and maintaining quarters during the session. Still there is no question that the society meeting affords the very best opportunity for a journal to get in touch with both the profession and the advertiser, and this plan, if systematically followed, will ultimately ensure a degree of success unattainable in any other way. We are, therefore, pleased to announce that the bureau service inaugurated by Mr. Charles Wood Fassett several years ago, will be continued at the American Medical Association meeting in Columbus, June 6th to 9th. A catalogue edition of the *American Medical Journalist* will be issued, containing a descriptive index to the medical periodicals and reference books contained in the bureau, and advertising matter of various kinds will be distributed for members.

Pullman Company Blamed for Consumption Contracted in a Car.—J. M. Edmonson, a prominent attorney of San Antonio, Tex., formerly of Dallas, has sued the Pullman Palace Car Company in the United States Circuit Court at El Paso, Tex., for $15,000 alleged damages. The plaintiff's grounds for the suit are

somewhat novel. He claimed that while journeying in a Pullman car from San Antonio to Denver he was drenched with rain water through a hole in the roof while asleep in his berth. From the effects of the wetting he says he contracted a severe cold, which resulted in consumption.—*Railway Surgeon.* We are inclined to think that the plaintiff in this case will have a rather difficult task to establish his claim. It seems to us that to prove that a severe cold will result in tuberculosis of the lungs is far from being an easy matter. No doubt the plaintiff has read the advertisements of quack catarrh doctors, and has thus been led to enter his suit.—*St. Louis Med. and Surg. Journal.*

The New York Post-Graduate Hospital is to have a new training school for nurses, the gift of Harris C. Fahnestock, and it will cost $100,000, supplanting the old one, which has become inadequate to the needs of the hospital. The new school will be known as the Margaret Fahnestock Training School for Nurses of the New York Post-Graduate Hospital. Mr. Fahnestock is founding the school in memory of his wife, and it is to bear her name. It seems that the last days of Mrs. Fahnestock's life were cheered and brightened by the tender care and ministrations of two trained nurses. Mr. Fahnestock took a deep interest in their work, and realized how much they had done to make the last days of his wife less of a burden, and the gift is a tribute to them and their calling and in memory of Mrs. Fahnestock.

A Curious Kind of Reasoning.—The New York doctors have discovered a very pleasant explanation of the increase of from 51 to 53 per cent. of male births, noticed during the past two months in the statistics of the Board of Health of the American metropolis. Many of them attribute this extraordinary increase of male births to the martial spirit which took possession of the population before and during the Spanish war. Dr. Tracy, of the Board of Health, without actually advocating this opinion, remarks that the coincidence is none the less striking. This theory will, doubtless, attract the attention of Dr. Schenck, who had not dreamed of moral influences of this kind, when he promulgated his theory on the procreation of children of one or the other sex.—*Le Progrès Medical.*

The Bubonic Plague is causing great devastation in Bombay City. It is stated that the disease is raging with unparalleled severity. The mortality has been increasing for some weeks past,

and is now greater than at any previous stage of the epidemic. The total number of deaths from all causes in the course of the week ending March 5th was 2,309, and 972 are officially returned as due to the plague. The calculation is unreliable, however, as no effective system of registration of the causes of death exists, and hundreds of plague cases are concealed. Reckoning the deaths from normal causes at 600, all those in excess of this number may be regarded as deaths from plague. The officially reported death-rate for the week is 139 per 1,000 a year.

The Canadian Medical Association.—On August 30th, 31st and September 1st, 1899, the next annual meeting of the Canadian Medical Association will be held at Toronto under the presidency of Dr. Irving H. Cameron. It is now some ten years since this association met in Toronto, and every effort will be put forward to make this the most successful meeting ever held. One of the most interesting features of the meeting will be the probable arrangement of the final details of a scheme whereby Dominion registration will become, in the near future, an accomplished fact. This, together with an ever-growing interest in the value of the Association as a promoter of scientific research, will add materially to the success of the Toronto gathering.

Bertillon System.—Dr. P. H. Bryce, the secretary of the Provincial Board of Health, and Drs. Pelletier and Lachapelle, of Montreal, who together constitute the Canadian Committee of the American Public Health Association, are engaged in preparing a circular, which will be sent to the colleges of medicine and physicians practising in Canada, pointing out that a combined effort will be made to have the Bertillon system of classifying diseases adopted by the various civilized nations of the world, in the decennial census at the opening of the twentieth century. Canadian physicians will be supplied with copies of the classification, and will be requested to forward suggestions for amendments therein.

The Ontario Medical Associaton.—This association will meet this year in Toronto on the 13th and 14th of next month. It is fully expected that there will be a very large attendance, more so probably than for many years past. Dr. Vincent Bowditch, of Boston, Mass., will open a discussion on "The Sanitarium Treatment of Tuberculosis." Dr. Wilson, of Philadelphia, will present a paper on " Perforations in Typhoid Fever." It is also expected that Dr.

Fenger, of Chicago, will open the discussion insurgery. All of those members who intend presenting a paper at this year's meeting are requested to forward at once the title of the same to the Secretary, Dr. Parsons, 97 Bloor Street West, Toronto.

Trinity Medical Alumni Association.—The annual meeting of the above association will be held in the theatre of the Normal School building, Toronto, on Wednesday, May 31st, 1899. The programme of the meeting will include the names of men well known to the profession, from the United States as well as from our own province. The annual banquet will be held in the evening, at which the gold medal offered by the Association for the thesis of most distinguished merit, written by a graduate of Trinity and read at the general meeting, will be presented to the winner. The General Secretary is Dr. George Elliott, 129 John Street, Toronto.

Public Health.—The Local Board of Health of Toronto has decided to ask that $4,000 be placed in the year's estimates for removing the smallpox hospital from Riverdale Park. Dr. Sheard, replying to further complaints as to the quality of milk, said that he would make another inspection of the byres of dealers, and if anything were wrong would call for the assistance of the Provincial Board of Health. It was decided to apply to the City Council for the $20,000 needed to build the isolation hospital. No action was taken on the proposal to erect a public abattoir.

Amendment to the Ontario Public Health Act.—An amendment to Section 104 of the Ontario Public Health Act was introduced by A. Pattullo, M.P.P., and carried at last session of the Legislature. It provides that, if a municipal council wishes to borrow money to purchase grounds or buildings, or to erect buildings for the purposes of a contagious diseases hospital, it shall be entitled to issue debentures, payable in five years, to cover the necessary expenses for the same, without asking for a vote of the ratepayers.

"Montreal Medical Journal."—Some important changes have been made in the operation of the *Montreal Medical Journal* with a view of making it still more efficient and of conducting it on a more satisfactory basis. Drs. William Gardner, F. G. Finley, Frank Buller, and H. A. Lafleur have been added to the editorial staff, with Drs. Wyatt Johnston, C. F. Martin, J. M. Elder, D. J. Evans, Burgess, Stirling, Lockhart, Hamilton, Birkett, Webster, K. Cameron, and Wilson as collaborators.

Marriage Licenses.—The Senate of North Dakota has passed a law providing for the appointment of a board of physicians to decide upon the fitness of applicants for marriage license to enter into marriage relations. Licenses will be refused to any who suffer from diseases that are likely to manifest themselves in their progeny, especially dipsomania, insanity, syphilis, and tuberculosis.

The Treasurer of St. Thomas's Hospital, London, has received an anonymous donation of £1,000 for the endowment of a bed, to be called the "Tom Hughes Bed," in memory of Mr. T. Hughes, Q.C., author of "Tom Brown's Schooldays."

The National Guard of the State of Pennsylvania.—We understand on the authority of the *Medical Bulletin* that its editor, Dr. John V. Shoemaker, has been appointed surgeon-general of the guard.

Dr. Grover W. Wende, of Buffalo, sailed for Europe by the North German Lloyd line, March 22, 1899, to be absent three months at Prague.

In the Rotunda Hospital, Dublin, it is proposed to supply the operating room with sterilized air.

PERSONALS.

Dr. G. R. McDonagh returned from the Mediterranean last month.

Eadie.—At 899 Queen Street West, on March 25th, to Dr. and Mrs. Eadie, a daughter.

Dr. S. G. T. Barton, who for years practised on Spadina Avenue, has given up practice.

Dr. T. B. Richardson has removed to 10 Carlton Street, and Dr. Warner to 520 Church Street.

Dr. J. D. Thorburn will shortly move into his magnificent new residence on Bloor Street West.

Dr. A. H. Garratt, of Bay Street, has the architect's plan for his new up-town home almost completed.

The estate of the late Sir William Jenner, physician in ordinary to the Queen and the Prince of Wales, is valued at $1,925,000.

Dr. Geo. B. Smith, of Toronto, was married a month ago to Miss Dunn, of Carlton Street. Congratulations, doctor. Dr. Smith's new address is 92 College Street.

The Physician's Library.

BOOK REVIEWS.

A System of Medicine. By many Writers. Edited by THOMAS CLIFFORD ALLBUTT. The Macmillans. Toronto: Carveth & Co. Vols. I., II., III.

In true literature, whether scientific or otherwise, there is no competition. The supply is limited. One might as well expect the Muse to menstruate more than once a month as to expect her to meet the illimitable trade requirements of present-day publishers and book mechanics. There was a time when a system of medicine, covering every branch of the subject and written by specialists in each department, was regarded with a certain degree of respect. Such works came in the usual order of nature as a general summing up or a reconstruction of classified knowledge, and represented an era in the growth of medical thought. They were thus of historical value almost, and no more to be lightly treated than the inviolable milestones on the highway.

They emanated distinctly from the leading exponents of medical progress, and the publishers' position remained in abeyance. The advances in medical knowledge at one time only required such a summing up in a quarter of a century. More recently a decade produces sufficient confusion to call for a new classification. With the increased activity of medical research there has also been a renaissance in the ambitious manufacturer of medical books. He has awakened to the undoubted value of systems of medicine. He has observed the phenomena of their selling qualities, and though things so desired cannot be forced or prepared by synthesis, like the German tar products, he has resorted to certain expedients by which he has been able to "put up" a species of merchandise which he calls medical literature, and which in the concrete *looks* somewhat like it. There is a great deal of this spurious material upon the market to-day. It never grew, but was made with hands, and in an unrolling machine something like those which they use to make wall-paper.

One could, I suppose, count twenty different systems of medicine which are being hawked about to-day among a genial profession, full of faith, abounding optimism, and a willingness to subscribe to a great many things. Most of these are *papier-mache* imitations, but the purchaser runs less chance of discovering this than he does of detecting the adulteration in his coffee; for he drinks the coffee, but does not always read the books. At such a time a system of medicine with a *raison d'etre* is certainly a desideratum, and without enumerating many dreary adventures among four, six, ten and twenty volume series, from every variety of pompous mediocrity down to the incoherent whispers of profound obscurity, nor forgetting sundry encounters also with certain hoary ghosts of the past in modern binding and new title-pages, we came in due course to the subject of our present review, and with the feelings of an impressario, take sincere pleasure in stating now that this system of medicine is *par excellence* one which has a legitimate scientific reason, and not a commercial object, for its being. It is literature, not merchandise.

A detailed review is not our present purpose. That has been done elsewhere. But the classification is lucid, the treatment of the various authors (or authorities, for each is one on his own subject) full, yet clear, and the whole the most able exposition of medical learning, as it stands at the close of the century, which we believe to have been written. E. H. S.

Nervous and Mental Diseases. By Archibald Church, M.D., and Frederick Peterson, M.D. Philadelphia: W. B. Saunders. 1899.

This work in reality embraces two separate treatises written separately by each author, but which, by reason of the close relation which they bear to each other, are conveniently bound within one cover. The greater part of the work is given to Dr. Church's treatise on "Nervous Diseases," which makes no claim, as the author admits, to be more than a carefully prepared text-book. This it certainly is, and considerably more, and that the demand for literature upon this subject is strong may be inferred from the fact that this is the second large American work on neurology which has appeared in the last few months. In the present volume each phase of nervous disease is briefly described, and the opening chapter on "Anamnesis and Physical Examination" is especially lucid and timely. "Diagnostic investigation in neurological work is a fine art," the author observes, and a full and careful sketch is given of the various delicate methods by which diagnosis in some of the more obscure affections is made possible. The illustrations are good, though in this respect the publisher has erred, if at all, in superfluity. Picture books are very diverting, but in a scientific work only those which are absolutely necessary to the comprehension of the text should be retained. This is becoming more and more a fault of medical publishers. The text is reliable, comprehensive, and, to use a term from the commercial world, "up-to-date."

Dr. Peterson's small monograph upon "Mental Diseases," which has been appended to the larger work, covers all the ground. Perhaps there is a certain lack of proportion in giving so much space to Paranoia, where the author has in the present work been tempted to incorporate very extensive quotations from the literary pastime of a Paranoiac, and which, of interest to the alienist though they may be, are non-essential to the readers for whom the short outline was prepared. On the whole, however, Dr. Peterson's *résumé* is very concise, and leaves very little to be desired. E. H. S.

A Text-Book of Mechano-Therapy. By Axel V. Grafstrom, B.Sc., M.D.

Mechano-Therapy is the mode of treatment of diseases by movements. In late years the field in which this means is employed has greatly extended. Many of the leading practitioners of medicine everywhere prescribe for chronic diseases some form of this treatment. It is founded on scientific researches, discoveries and facts, and has done much toward freeing both profession and patients from the slavery of drugs. It is divided into two branches, *medical gymnastics* and *massage*. The nature of the treatment is such as to confine its employment largely to the cases which are treated in institutions, as an intimate knowledge of the details and a skill which comes only from practice are essential to success. Dr. Grafstrom has given us a book which may be a safe and valuable guide to the trained nurse and also to the practitioner, who already has a thorough acquaintance with the principles of anatomy, physiology and pathology. While the author is a warm advocate of mechano-therapy, yet he is not so much carried away as not to recognize its limitations. Herein lies a danger. The specialist in the use of any therapeutic agent is apt to regard it as a "cure-all," while the general practitioner, not knowing its full capacity, is apt to overlook its usefulness. B. E. M.

The International Medical Annual, 1899. A work of reference for medical practitioners, alphabetically arranged; combines the features of an annual retrospect with those of a medical encyclopedia. Copiously illustrated with elegant plates, in colors and black and white. Seventeenth year. E. B. Treat & Co., 241-243 West 23rd Street, New York; John Wright & Co., Bristol, England.

It gives us pleasure to add our word of praise of this the seventeenth "International Medical Annual." Every year since its inception it has improved until the 1899 edition beats the record, being larger in size and more complete

than any predecessor. It contains the most recent methods of treatment, the latest additions to our already large list of therapeutic agents, besides a thousand and one points of value to the practitioner who wishes to be up-to-date. We congratulate the publishers upon the result of their work, and recommend everyone to invest in a copy. Among the special articles will be found the following: "Practical X-Ray Work," by R. Norris Wolfenden, M.D., B.A.; "Advances in Skull Surgery," by Seneca D. Powell, M.D.; "Surgical Treatment of Paralysis," by Drs. Robert Jones, F.R.C.S., and A. H. Tubby, M.S., M.B. These articles are freely illustrated, chiefly by reproductions from photographs. An excellent article on "Climatic Treatment of Consumption," by F. de Havilland Hall, M.D., F.R.C.P., as well as one on "Legal Decisions Affecting Medical Men," by William A. Purrington, A.B., LL.M., will be found interesting and pertinent. There will be found also an article on "The Chief Pathogenic Bacteria in the Human Subject," with descriptions of their morphology and methods of microscopical examination, by S. G. Shattock, F.R.C.S., the Pathological Curator of the Museum of the Royal College of Surgeons, London, illustrated by a series of finely-colored plates.

W. A. Y.

An Essay on the Nature and the Consequences of Anomalies of Refraction. By F. C. Donders, M.D., late Professor of Physiology and Ophthalmology in the University of Utrecht. Philadelphia: P. Blakiston's Son & Co. 1899. $1.25.

This translation, by Dr. C. A. Oliver, of Donders' immortal work will be of great value to all interested in the history of Ophthalmology. One cannot but wonder at the accuracy and precision of Donders' results—years have brought but little change in his axioms. A goodly head set upon massive shoulders looks out from the title-page—a face of strength and determination. It explains how Donders' axioms have suffered little change in the long years since his death. This translation, by Dr. Oliver, wears a fitting dress of paper, letterpress, and binding, in keeping with the veneration and love with which Donders is regarded by all ophthalmologists. J. M. M.

Retinoscopy in the Determination of Refraction at One Metre Distance, with the Plane Mirror. By James Thorington, M.D. Third edition. Philadelphia: P. Blakiston's Son & Co. 1899. $1.00.

Of all the methods of determining the refraction of the eye, retinoscopy is by far the most trustworthy. It demands the use of a mydriatic, without which refraction can never be accurately determined. As a description of how to do retinoscopy this book is excellent; as to the "why" of retinoscopy it is not so admirable. Every man prefers his own tools, and Thorington is no exception. He describes at length a light screen of his own device, very ingenious no doubt, yet retinoscopy can be done without any such complicated apparatus. J. M. M.

LITERARY NOTES.

The Macmillan Company announces the early publication of *Surgical Technique, a Handbook and Operating Guide of all Operations on the Head, Neck and Trunk.* With five hundred illustrations. By Fr. von Esmarch, M.D., Professor of Surgery at the University of Kiel and Surgeon-General of the German Army, and E. Kowalzig, M.D., late First Assistant at the Surgical Clinic of the University of Kiel. Translated jointly and edited by Professor Ludwig H. Grau, Ph.D., formerly of Leland Stanford University, and William N. Sullivan, M.D., formerly Surgeon of U. S. S. *Corwin*, Assistant of the Surgical Clinic at Cooper Medical College, San Francisco. This work, now for the first time translated into English, has been thoroughly revised and enlarged

by the translators, who have brought every operation up-to-date. It is a book which has for some time been of much importance to all surgeons who can read it in the German. The translation has been undertaken under the authorization of the German publishers, Messrs. Lipsius & Fischer, and the text used is that of the latest German edition, the sheets of which are now going through the press. There are upwards of five hundred illustrations of operations upon the head, neck and trunk. The translators have also embodied the best American instruments in the illustrations, and have omitted such German illustrations as are of little or no value for the American surgeon. In a word, their reproduction will form a complete, practical, operating guide for the American surgeon.

Impaired Eyesight ; Its Improvement by Glasses is the title of a book which should prove of interest to many besides medical men. Its author is D. B. St. John Roosa, M.D., LL.D., Professor Emeritus of Diseases of the Eye and Ear at the New York Post-Graduate Medical School and Hospital, and surgeon to the Manhattan Eye and Ear Hospital. Dr. St. John Roosa has revised and very carefully enlarged the first edition of this work, which was published under the title "The Determination of the Necessity for Wearing Glasses," so as to make it a complete manual for the student and practitioner. The treatise takes up all conditions requiring the use of glasses, and indicates in the most careful manner the rules for prescribing them. It contains six chapters, and will be illustrated, so that a perfect understanding of the text is made easy. The revolution which has been produced in modern ophthalmic practice by the invention of a practical and exact instrument for measuring the radius of the cornea, is fully dwelt upon. The work is not too technical for the comprehension of every well-educated man.

Parker and Haswell's *Manual of Zoölogy* has been edited and adapted for use in the United States and Canada by A. S. Packard, Professor of Zoölogy and Geology at Brown University, and author of *A Text-Book of Entomology*. Common American forms closely similar to the European or Australian have been mentioned, so that the student can use the book in examining the typical forms from his own country. In the majority of cases the European species differ only in trivial characteristics, so that one general description will answer for both. A few additional American animals have been referred to and figured, while a few cuts have been copied from Parker and Haswell's *Text-Book of Zoölogy* and also from Sedgwick's *Text-Book of Zoölogy*.

"How They Do It."—"Some of the abstracting from 'foreign journals' which graces the pages of the new Quaker City journal is taken bodily from the *Medical Record* without credit. A case in point is a long abstract on page 605 of the March 18th issue, taken from the *Medical Record* of February 4th. The truth is, the *Medical Record* has the earliest and best extracts, and since the journal does not pay for its work of this kind, the young men are losing their enthusiasm and find it easier to go to a trustworthy rather than to the more difficult original source."—*Medical Record.* We are glad the printer's "stone-man" made the omission noted—the proper credit was in Dr. Stevens' manuscript, and was unintentionally cut out in "making-up"—because it gives our genial and urbane contemporary his single and coveted opportunity for displaying his characteristic courtesy and truthfulness. It would, of course, be useless to recall to his attention an appropriate Scotch proverb—"Riven breeks should sit still!"—*Phila. Med. Jour.*

Selected Articles.

TANNOFORM.

Tannoform is a condensation product of tannin and formaldehyde, of the formula $C_{29}H_{20}O_{18}$. It occurs as a loose, reddish-white powder, insoluble in water, but soluble in alcohol, in ammonia water, and solution of soda or of sodium carbonate; it melts with decomposition at 230° C.

According to a number of reports from eminent dermatologists, tannoform is an excellent and perfectly innocuous antihidrotic and siccative antiseptic in bromidrosis (offensive perspiration) and hyperidrosis (excessive sweating) in any part of the body, and in soft chancre, bed-sores, ulcers, ozena, and cervical catarrh.

Professor von Mering has conducted an extended series of experiments with tannoform, and reports as follows:

"Tannoform, used externally in substance or in 20 to 50 per cent. triturations with powdered starch, promptly checks excessive sweating. In bromidrosis of the feet I have repeatedly employed tannoform on the one foot, and tannic acid on the other, by way of comparison, and found that the tannin was considerably less active than the tannoform. Compared with salicylic acid—which is the chief remedy heretofore used against this trouble—tannoform proved to be more pleasant and more efficacious. Tannoform is of service also in the treatment of old wounds, such as fetid ulcers of the leg and running eruptions; it also possesses disinfectant properties. It may be used either pure, or mixed with starch or talcum, or as a 10 per cent. ointment.

"Even when dusted over in small quantities, it quickly suppresses the hyper-secretion of sweat and completely removes all odor. It is greatly superior to any of the remedies hitherto used in cases of hyperidrosis and bromidrosis, and it forms, more especially, a valuable substitute for chromic acid, which, owing to its exceedingly poisonous nature, is highly objectionable.

"Tannoform has the further advantage that it does not, like salicylic acid, tartaric acid and formaldehyde foot-baths, shrivel the skin, or stain it like iron chloride.

"Tannoform differs essentially from tannin. Tannin is readily soluble in water; tannoform is insoluble in that solvent. Tannin has a harsh, astringent taste, and possesses in a marked degree the property of forming hard, very coherent, water-insolvent compounds with the tissue elements. Albumen, peptone, gelatin, mucus, etc., are, therefore, precipitated by tannic acid. After

ingestion, tannin rapidly unites with the albuminoids present in the contents of the stomach or adhering to the mucous lining, and, therefore, cannot reach the intestines in active form. Applied to mucous membranes, especially if in excess, tannin is prone to cause irritation; it may tan the stomach so intensely as to disable it for weeks. Even after the ingestion of small doses of tannin, especially on an empty stomach, the gastric mucous membrane becomes corroded, the appetite diminishes, and a sense of weight and of pain is felt in the stomach.

"Tannoform, on the other hand, exercises no irritant or corrosive action on the mucous membrane, and is indifferent in doses in which tannin would be deleterious to gastric digestion. Tannoform, being insoluble in water and acids, but soluble in diluted alkalies, is not assimilated in the stomach, and, therefore, reaches the intestinal canal unchanged—that is, in an active form. On taking 0.1 to 0.2 gm. (1½ to 3 grn.) of tannin into the mouth, a bitter, harsh taste is experienced, and after the taste disappears the mucous membrane of the mouth becomes much irritated. Tannoform, on the contrary, is tasteless, even if taken in quantities of 1 gm. (15 grn.), and exercises no irritating or caustic action on the buccal mucous membrane. The administration of tannic acid (in chronic intestinal catarrh), even in doses of but a few centigrammes, is sometimes followed by vomiting and a sense of pressure in the stomach; whereas, in these same cases, tannoform produces no such symptoms, even when given repeatedly in 1 gm. (15 grn.) doses."

Drs. de Buck and de Moor conclude their paper on the properties of tannoform with the following words (*Belgique Médicale*, 1896, No. 33):

"The clinical observations of which we have given a short account show, in our opinion, clearly enough that tannoform is a really valuable therapeutic agent. As might have been expected from its composition and chemical properties, tannoform has proved to be an excellent intestinal astringent and antiseptic. In this respect its action bears in every sense comparison with that of its congener, tannigen.

"We would more particularly call attention to the local action of tannoform. We have not as yet met with a single case of local hyperidrosis that has refused to yield to the action of tannoform. Often its action is in fact so rapid as to render it necessary to exercise caution in its application, since the sudden suppression of a process of secretion to which the system has become accustomed cannot possibly be treated as a matter of total indifference. We therefore consider it desirable to induce diuresis (by means of diuretic decoctions of milk) as well as to produce purgative effects (by means of podophyllin and belladonna, cascarin, etc.) in all cases where the patient, having suffered for a considerable time from hyperidrosis, requires effective treatment. It should be remarked in this connection that excessive secretion of sweat is a particularly

frequent affliction of nervous patients suffering from gout or anemia. It may therefore be advisable to endeavor to modify this constitutional anomaly by means of alkalies, nerve-sedatives, and tonics."

MULTIPLICITY OF MEDICAL SOCIETIES: CONSOLIDATION THE NEED OF THE HOUR.

Of the utility of organization, and of that special kind that is exemplified in the medical society, there can be no shadow of doubt. In union there is power and in well-directed organization progress. The tendency of the day is toward centralization rather than the opposite, and it is from this point of view that we wish to say a few words, suggestive rather than conclusive, with regard to the waste of energy, time and resources entailed upon the medical profession by reason of the existence and continued organization of what appear to us unnecessarily large numbers of medical societies.

Thus, we have several organizations of national scope and membership; in most commonwealths, State medical societies, and in the counties, cities and towns thereof, usually local and constituent bodies. In the large cities, as for instance, Chicago, New York and Philadelphia, there are often several individual bodies whose work and membership are of a general and similar character, and, besides, a large number with independent organizations devoted to the special departments of medicine; not including the intramural collegiate societies that exist in some places almost without number. There must thus result a considerable waste of time, energy and money, and it seems that with such a division—one might say dissipation—of forces, the influence for good that the constituent membership would otherwise be capable of wielding must be materially attenuated.

It is in this spirit that we beg, therefore, to make a plea for consolidation, for a union of forces, that the greatest good may inure to the largest number. Why need there be more than one great national American medical body—as there is but one great national British medical body—with the organization of sections in all of the departments of medicine? Each State and Territory would also require but one central organization, and one society would suffice for each county, with as many special and geographic divisions and branches as the exigencies of the individual case would demand.

The difficulties of such consolidation and reorganization as we suggest are not insurmountable; the details could easily be arranged, and the result, if consummated, would unify and strengthen the medical profession as no other measure is capable of doing. With such a united body the cause of preventive medicine would be greatly forwarded. Besides antivivisection and antivaccination, there will be other battles to be fought in the public welfare, and

divided forces will fail where united influences must prevail.—*Journal of Amer. Med. Assoc.*

[What the *Journal of the American Medical Association* says herein applies to Toronto as much as to any other city or country. What an advantage it would be if in Toronto this example were followed and all of our too numerous societies amalgamated. However, this will never be so long as the spirit at present prevalent in Toronto exists, of every one wanting to be President or Vice-President, offices entailing certainly more work than glory. —Ed.]

Vichy Natural Waters.—There are at Vichy three principal springs, the analysis of which shows a considerable degree of similarity. These springs are known under the name of *Célestins, Grande-Grille* and *Hopital.* They are strongly alkaline waters, pleasant to the taste, easily digested, and lose practically none of their properties when bottled and exported. The analysis follows:

ANALYSIS

as given by Cyr in Jacoud's "Nouveau Dictionnaire de Médecine et Chirurgie Pratiques."

The calculation is made in grammes and per litre.

	Grande-Grille.	Celestins.	Hopital.
Sodium Bicarbonate	4,883	5,103	5,029
Potassium "	0,352	0,315	0,440
Magnesium "	0,303	0,328	0,200
Strontium "	0,003	0,005	0,005
Calcium "	0,434	0,462	0,570
Ferrous "	0,004	0,004	0,004
Manganous "	Trace	Trace	Trace
Sodium Sulphate	0,291	0,291	0,291
" Phosphate	0,130	0,091	0,046
" Arseniate	0,002	0,002	0,002
" Borate	Trace	Trace	Trace
" Chloride	0,534	0,534	0,518
Silica	0,070	0,060	0,050
	7,006	7.195	7,155
Temperature (Fahrenheit)	107.6°	57°	86°

This analysis shows conclusively that the Vichy waters have an ideal composition. They are strong enough in alkaline elements to be able to saturate the organism with alkaline salts within a comparatively short while. They can be taken for a prolonged period of time, and in this respect are of the highest value, since most of the diseases for which they are prescribed are either of a chronic nature, or, if in the form of an acute attack, depend upon nutritive disorders that have existed for a long time, such as the uric acid diathesis and disturbances of the stomach and liver due to functional disorder.

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The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

VOL. V. TORONTO, JUNE, 1899. NO. 6.

Original Contributions.

ABSTRACT OF AN ADDRESS ON A PROPOSED SCHEME FOR A DOMINION MEDICAL COUNCIL.

BY T. G. RODDICK, M.D., LL.D., M.P.,
Professor of Surgery, McGill University.

As you are all aware, by the British North America Act, the subject of education was placed within the exclusive jurisdiction of the Provincial Legislatures. Section 93 of that Act reads: "In and for each Province the Legislature may exclusively make laws in relation to education, subject and according to the following provisions." These provisions do not, however, interest us, as they have reference entirely to common schools. This fact would give one the impression that professional education was not meant to be included in the section, or that it was overlooked or forgotten by those who were responsible for the framing of the Act.

The confederation of the Provinces had scarcely been consummated when our profession realized that a mistake had been made, and that the multiplicity of medical boards throughout the Dominion would lead to great abuses and untold complications. Therefore we find the Canadian Medical Association at one of its earliest meetings, in 1869, suggesting a Dominion medical bill, called "The Medical Act of the Dominion of Canada." This bill, most comprehensive, was presented before the Association at the third meeting, in the city of Ottawa; and after a long and somewhat acrimonious debate, was finally abandoned; and so far as I know, was never brought up for reconsideration. Doubtless the fact that the profession in Ontario had, in the meantime, put into

operation their own medical Act, militated against the greater scheme. I am inclined to think that other reasons for its early demise are to be found in the attempt made, practically, to expunge the provincial boards, and also to give a preponderating influence to the universities.

Nothing further was done, however, in this direction, until a very few years since, when, at a meeting of the Canadian Medical Association in Kingston, a committee was formed to discuss and report upon the question of interprovincial registration or some scheme of reciprocity, all with a view to harmonizing the practice of the profession throughout the Dominion, but more especially on the frontier settlements of the various provinces.

Little of a practical character was accomplished until last year, when the committee reported very fully, making among other recommendations the following: "That so soon as the various councils of the Dominion shall establish an examining board of the Dominion, conducted by examiners appointed by the Medical Councils of the several provinces, their candidates passing a successful examination before said board, and obtaining a certificate to that effect, shall be entitled to registration in the several provinces of the Dominion on payment of the registration fee, providing they are not guilty of infamous or disgraceful conduct in a professional respect.

"Your committee desire to recommend that further efforts be made to ascertain the practicability of federal legislation leading to the establishment of a central qualification, which will also place the profession in Canada upon an equal footing with that of Great Britain, and that Dr. Roddick be authorized to take the necessary steps in said matter.

"We further recommend that this Association shall appoint a committee who shall consider and recommend the details as to the number of examiners to be appointed, the method of conducting examinations, the fees to be charged, and other necessary details to bring the aforesaid scheme into active operation, which details the officers of this Association shall, with the foregoing, send to each of the respective councils for approval."

The following were named as a committee to strengthen Dr. Roddick's hands before the Government: Dr. McNeill, Prince Edward Island; Dr. Muir, Nova Scotia: Dr. Walker, New Brunswick; Hon. Dr. Marcil, Quebec; Dr. Williams, Ontario; Dr. Thornton, Manitoba; Dr. Bain, North-West Territories, and Dr. McKechnie, British Columbia.

(The delegates from Quebec on the committee could promise nothing with regard to a central examining board for the Province of Quebec, the universities having already positively refused to surrender their charter rights.)

Feeling the responsibility of this charge, I have been engaged more or less, ever since the meeting, collecting information from various sources (among others from the law officers of the Crown),

and am now in a position to place before the profession of Canada a scheme which, if acceptable to the various medical boards of the Dominion, may, I trust, with some modifications, become law at no distant date.

At first sight it would seem as if any plan were impossible that looked to united action. The Dominion Parliament cannot, on the one hand, infringe on the provincial jurisdiction, while, on the other hand, the Provincial Legislatures cannot unite in creating a central or federal medical board, because their powers are, in each instance, confined strictly to their own territory. If this opinion be correct, any scheme looking to interprovincial registration, or, in other words, any bargain made between the profession in the various provinces, or between the Boards as representing the profession, would be *ultra vires*.

Under Section 91, however, of the British North America Act, the Dominion Parliament has power "To make laws for the Peace, "Order and good Government of Canada, in relation to all matters "not coming within the Classes of Subjects by this Act assigned "exclusively to the Legislatures of the Provinces." Under these general terms it is believed that the Dominion Parliament may create a corporation for such objects relating to medical education and practice as are of general Dominion interest and importance, and as are beyond the provincial powers.

Uniformity of medical education and the promotion of interprovincial registration are just such objects. The plan by which it is now proposed (for our purpose) to effect them is as follows:

By an Act of the Dominion Parliament, a corporation may be created, called, let us say, *The Dominion Medical Council*, which would be composed of medical practitioners from each province and from the North-West Territories. The principal function of this council would be to register all persons who have complied with certain requirements, as to education and training for the practice of medicine and surgery, and all applicants who shall have complied, would receive what might be termed Dominion registration by the council.

This registration would, however, *per se*, confer no right to practise in any province of the Dominion. The Dominion Parliament has, of course, no power to make such an enactment; but it is within its power to enact that such registration shall alone confer the right to practise in any of the territories over which it has direct legislative control; and it may provide that such registration shall be a condition of employment in any medical capacity in the active service of the Dominion, as, for example, the quarantine service, penitentiary surgeons, mounted police surgeons, the surgeons of the militia force generally, etc. Besides another important result of the establishment of such a system would be that medical practitioners registered under it could claim registration under the Imperial Medical Act of 1886, without undergoing further examination. By this Act (as you are aware), where

parts of a British possession are under both a central and a local legislature, the authority of the central legislature is requisite to entitle a colonial practitioner to British register. Under the existing systems of provincial registration, Canadian practitioners are debarred from entering the extensive field of medical employment in the various departments of the Imperial service, such as, for example, the army and navy, the Indian medical service, the colonial medical services, medical service under the Board of Trade, including ships' surgeons, etc., also from employment as sanitary officers in the United Kingdom.

At this point, however, the powers of this council would cease. *In order to bring about what we most desire*, viz., interprovincial registration, all the medical boards in the Dominion would have to be consulted, and their consent obtained to the passage of a short Act in their own Legislature, giving the right to any person registered under the Dominion Act to practise in any province, subject, of course, to the payment of any fee that the Province may impose. It will have to be shown further, that the person obtaining Dominion registration has given evidence of possessing qualifications at least equal to those required for registration under the existing law of any province. In other words, the educational standard as to preliminary examination for study, the professional curriculum followed and the final examination must be fixed by the Dominion council at a level as high as or higher than that of any province, with power in the council to keep it always so; and in case of failure at any time to maintain the standard, the Governor-General in Council might have power to intervene.

In the case of some of the Provinces, where the medical councils already possess the power of determining such equivalents, this matter could, perhaps, be arranged directly by these councils. The medical councils of Ontario, Nova Scotia and the North-West Territories have by recent enactments obtained such powers.

It will be observed that the proposed plan avoids in every possible way any encroachment upon the exclusive right of the Provinces as to maintaining their own system of medical education and registration. *I fully realize that any scheme, to have a sound constitutional basis and prove acceptable in working, must not encroach upon the provincial autonomy.* The various provincial medical boards or councils (as they may be termed), shall continue their work of examination and registration as before, and to them shall be left all questions of taxation, discipline, etc. In a word the establishment of a Dominion Medical Council would simply provide a direct and efficient way of interprovincial registration, while promoting a high level of professional education.

One of the most difficult problems in connection with this subject is the composition of the proposed council. It is evident that it must be thoroughly representative of the Provinces; and as it will have to deal with professional questions, it should be kept above the plane of political interference. The matter, however, being one of great public importance, and the assistance of the

Dominion Parliament being invoked, some provision would doubtless have to be made for the representation of that interest.

Let me suggest, then, that a Provincial Council consist of three classes of members, all of whom would be registered medical practitioners:

(*a*) One from each Province, including the North-West Territories, to be appointed by the Governor-General in Council.

(*b*) One from each Province, including the North-West Territories, to be appointed by the Medical Council of the Province.

(*c*) The President of each Provincial Medical Council to be an *ex-officio* member.

This would give a council of twenty-four members.

It is a question whether all the Provinces should have an equal number of members in the council as permanently constituted, or whether the representation should be in some measure graded according to the relative number of practitioners in each Province. In any case it would be desirable to keep the council of moderate number, for ease and efficiency of working, and to secure a representative majority at all times.

Now, so far, the outline of the proposed scheme deals only with students of medicine wishing to qualify themselves for practice in all or any of the provinces which accept Dominion registration as sufficient evidence of professional capacity.

With regard, however, to medical practitioners actually practising at the time of the passing of such an Act, should the right be given them to avail themselves of the privileges under the Act admitting them to practise in other provinces than that in which they had originally qualified? Should it be retroactive?

Many objections would doubtless be raised to such a clause, especially by the profession in the younger provinces who might dread a stampede in their direction. This could readily be overcome, however, by making some time limit, say, five or seven years of actual practice, coupled with evidence of good professional standing. Medical men in practice for that length of time would not be so likely to migrate as the more recent graduates.

There are many matters of detail that might be introduced, but my chief purpose to-night is to excite a discussion on the general practicability of such a scheme as that which I have endeavored to outline.

The present state of affairs in connection with the practice of our profession in this country is anomalous, and exists, perhaps, nowhere else. Where we have simply imaginery lines or narrow rivers separating our provinces the present arrangements must continue to lead to hardships, both to the public and to medical men themselves, and sometimes to grave abuse. Besides, the provinces are all congested, the number of medical men being far too numerous in proportion to the population. This scheme would not only lead to a more equable distribution, but it would throw open the entire British Empire to our Canadian youth who have adopted medicine as a profession.

ON THE ROLE OF THE GONOCOCCUS IN SURGICAL PATHOLOGY AND SECONDARY INFECTIONS.*

BY THOMAS H. MANLEY, M.D., NEW YORK,

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It is most extraordinary to note, what recent researches have done in the way of demonstrating the dreadful lethality of various types of gonorrheal infection. But, many years ago—now more than a century—the celebrated Hunter proved that gonorrhea was something more than a harmless infection and was more destructive than syphilis, if indeed, it was not but one phase of this malady.

Ferro has shown that so great is the virulence of some types of gonorrhea, that the gonococcus can enter tissues without any pre-existing lesion, "for," he asserts, "if a virulent culture be simply touched on the meatus urinarius the disease will be established." It is curious to note that Von-der-Pegu insists on the importance of a bacteriologic examination in all forms of urethral inflammation, because, he claims, this may be produced by colon-bacillus and staphylococcus-pyogenous. In this connection it is interesting to observe, that Walsh claims that the epidermis-staphylococcus always penetrates deeply into the Malpighian layer, while we always have on epithelial surfaces a harmless saphrophyte, which, however, may promote suppuration—the staphy-pyogenous-alba. Bumm and others have found cocci simulating the true blennorrhagic in the healthy urethra, and declared that neither the shape nor the grouping in the epithelia, is positively characteristic or diagnostic.

Bangs is a strong believer in the innocent propagation of gonorrhea, as Kratter was able to demonstrate the presence of gonococci upon washed clothing, six months after the original soiling.

It is rather remarkable, however, that a disease which is said to possess such tenacity and such contagious properties is not more widespread.

On this, McFarland observes that "one of the most astonishing facts observed in physiology or pathology, is the resistance which certain animals show to the invasion of their bodies by the germs of disease." It might be added that this immunity which often baffles scientists and constitutes one of the greatest barriers to the germ theory of disease, is not only true of animals, but also organs and structures of the same body.

Sternberg says, that the mucous-membranes which are peculiarly susceptible to gonorrheal infection, are those of the urethra, the conjunctiva, the cervix-uteri; and, the vagina in children; though this escapes in adults.

In May, 1767, John Hunter inoculated himself with gonorrhea, by puncturing his glans-penis and prepuce with a lancet dipped in

* Written specially for The Canadian Journal of Medicine and Surgery.

the secretion. Both incisions were then cauterized. They then healed, but suppuration followed, and later, the most virulent type of syphilis followed. This experiment on his own body very naturally convinced Hunter that gonorrhea was something more than a local disease. Recent events have quite fully sustained Hunter's position, though the weight of opinion is, that gonorrhea and syphilis are by no means identical.

Scientific advances have demonstrated, that of all causes there is none so potent in provoking suppuration in the pelvic organs of women as gonorrhea; and that, in the male, of the many grosser lesions of the kidney necessitating radical surgery, none plays a more important role as an etiological factor.

In former times, the arthritis, the iritis, the pericarditis and other more remote effects of blennorrhagia were said to be "metastatic," but now we have proof that infection is directly conveyed, either through the blood-stream or the lymphatics.

For some reason not yet clear, the secondary infections of gonorrhea have, like the toxic agent of rheumatism, a special affinity for the fibro-serous structures, as the peritoneum, the meninges, the pericardium, the pleura, iris and joint envelopes. It is well when these parts are the seat of acute inflammation in young people, to inquire into the previous history of the patient, whether or not they have not had a recent, acute attack, the discharge suddenly ceasing: or whether, there may not have been a recrudescence, in a chronic, imperfectly cured case.

Once assured that the system is infected, and a life is imperilled, Fournier and Record to the contrary, notwithstanding, we must accept the dictum of Hunter and speedily saturate the system with mercury, or all is lost.

MY LOVABLE FRIEND THE LAPIDO-MANIAC.

BY ALBERT S. ASHMEAD, M.D., NEW YORK.

Captain Samuel W. Dewey, seventy-five years of age, a diamond-tester by trade, lived in Philadelphia. He wore, winter and summer, a long rather heavy overcoat, double-breasted, ornamented with two rows of brass buttons. This coat was further remarkable by an enormous number of pockets; there were no less than fourteen in it. His collar was equally phenomenal, being exceedingly high and stiff, and encompassed by an old-fashioned black stock. He was a retired sea-captain: he had followed the sea for twenty-three years. It was his great love for mineralogy which made a diamond-tester of him. That love produced its first practical effects at so advanced an age, sixty, that there was something phenomenal in that, too. It was perhaps the habit and delight he had of looking at smooth, brilliant stones that made it

impossible for him to look at his own face in a hirsute state; it was always polished, that is, shaven. His eyelids, when he spoke to you, were always moving rapidly, which reminded you also of the glitter of a diamond. When he spoke of his favorite subject they were, however, devoutly closed.

Just as there is in a brilliant, something that catches at once, keeps and delights the eye, so there was in the expression of his face, a charm of benevolence which took possession of you at once and kept your attention irresistibly. His face was lovable, and I knew no man to come in contact with him without loving him. His home was a second-story back room in a Philadelphia dwelling-house. But he made apparently little use of it. He liked to roam about second-hand book-stores and hunt for old books on gems, which he used to read in somebody else's room, mostly at night. He lived on St. John's bread, loaf sugar, and crackers. He has spent many entire nights in my office, ruthlessly burning my gas till the peep of dawn, reading some tattered, yellow-leaved and curiously smelling cadaver of a book just resurrected from a commune sepulchrum. And with what exuberance of eloquence and enthusiasm, with what beaming eyes he would exult over his luck, and praise his conquest, and explain to you what treasures it contained, the equal of which no other book could own, not the Bible, nay, not even the Koran or the Zend Avesta!

I am sure that any reader of ordinary acumen understands or guesses at once what was the use of his fourteen pockets: none was empty, for they were his library, his safe, his larder, his museum. They contained diamonds, pigeon-blood rubies, topazes, amethysts, the stones of the twelve tribes of Israel, books, St. John's bread, a few pennies, his precious tests, etc. He had two tests for diamonds. One was a sharp-pointed stone, in the shape of a lead pencil, which, by scratching, determined the hardness of the gem under examination. This test was original with him. While traveling in North Carolina many years before, of course on a mineralogical excursion, he found that a certain stone which he had picked up rattled, and that it was elastic; when he made sections of it, it appeared that its crystals were of a peculiar sort unknown to him, being loosely hooked together instead of faceted. He took this stone to Professor Henry, of the Smithsonian Institution, and for twelve years tried to make him place it as the Adamite stone, that is, the *vertebrated* stone of the mineral kingdom. As man is the head of the animal kingdom, said Captain Dewey, this stone was the chief of the minerals. Professor Henry was of a cold nature that could not see the thing in the same light; he would have nothing to do with the vertebrate stone. The stone was then submitted to Professor Agassiz, or Professor Agassiz to the stone. It appeared then that the skull of Professor Henry must have been of enormous thickness, pachyosteal in fact, for what Captain Dewey had tried for twelve years to hammer into it without success, penetrated the gray matter of Professor Agassiz with the

rapidity of lightning. Here was indeed the Adamite stone. Afterwards Captain Dewey, in experimenting with the stone in a crucible, found that heat intensified its hardness and permitted it to scratch all other stones except diamonds and sapphires. Rating precious stones then from 1 to 10, the diamond being at the top, the Adamite would scratch all up to nine. It was, therefore, a test for the diamond, the color of the sapphire (9) being characteristic enough.

The second test was a solution of carbon and gave only the brilliancy of the stone, as it would show through the carbon water. You see that the Captain was in mineralogy, in the knowledge of precious stones, a perfect expert. He was the tester of Bailey, Banks & Biddle, and James E. Caldwell & Co., of Philadelphia.

He claimed distinction for two things only: the discovery of the Adamite, and for having sawed off the wooden figure-head of General Jackson from the United States frigate *Constitution* in Boston harbor, having swum out, on a stormy night, a mile and a half in the harbor to perform this patriotic feat. (Andrew Jackson was a hated man in Boston.) I do not know how much they gave him for that in Fort McHenry.

These were the great performances of his life, and comparing the latter to the first we may well say, *dissimile hoc illi est.* Yet I believe he enjoyed their remembrance equally.

His two tests were always carried each in a tin box with a brass padlock; but his precious stones were borne loosely in his pockets—diamonds, pigeon-blood rubies more valuable than diamonds, emeralds of enormous size, etc. He took them out at times, content to enjoy, absorbed and chuckling, their beauty of cut and their brilliancy.

Carbolic-acid Poisoning.—In a case of carbolic-acid poisoning by vaginal douches the patient felt extreme burning as soon as the syringing was begun; nevertheless, the entire fountain-bag was allowed to empty itself. In a few minutes the patient complained of agonizing pain all over her pelvis, and began to shriek with suffering. On examination the tissues were found to be very tender to the touch, and large eschars appeared wherever the solution had touched the skin. *Treatment:* The patient was immediately syringed with a warm solution of sodium sulphate, one drachm to the pint, and cloths saturated with the same solution placed on her blistered thighs, etc. Within ten minutes she felt somewhat relieved, and in thirty minutes all pain was gone. Saturated cloths were kept on the blistered parts all night, and next day the patient was perfectly well. Sodium sulphate forms with carbolic acid sulphocarbolate of sodium, which is soothing in effect and prevents the carbolic acid from doing further damage.—B. Weiss, *New York Medical Journal*, January 7th, 1899.

Clinical Medicine.

...IN CHARGE OF...
ALEX. McPHEDRAN, M.D.

THE ADIRONDACK COTTAGE SANITARIUM FOR THE TREATMENT OF INCIPIENT PULMONARY TUBERCULOSIS.

BY E. L. TRUDEAU, M.D., SARANAC LAKE, N.Y., U.S.A.

The Adirondack Cottage Sanitarium was the first institution in America to attempt the cure of incipient tuberculosis in persons of moderate means. It had its origin fifteen years ago in a desire on the part of the writer to make a practical application of the sanitarium methods of treatment adopted by Brehmer, and to extend the benefits of these methods and of an open-air life spent under good climatic influences to working men and women whose lives are constantly sacrificed on account of their pecuniary inability to avail themselves of these means of restoration.

In 1884, by personal appeals, a few thousand dollars were obtained, with which one small cottage and a wing of the intended main building were erected. Each year the work was developed step by step, and the running expenses met, principally through the generous aid of guests at Paul Smith's Saranac Inn, and other hotels in the Adirondack region, who contributed and held annual fairs during the summer for the benefit of the institution. Its growth has been steady and uninterrupted, until a small village consisting of twenty-two cottages, accommodating one hundred patients, now stands on the original site where, fifteen years ago, the institution made so humble a beginning.

The requisites for admission to the sanitarium are that the applicant should be in the earlier stages of the disease, or, at least, that in the opinion of the examining physician he has a fair chance of more or less complete restoration to health, and that his pecuniary circumstances should be such that he cannot afford to pay the usual prices asked at the hotels and boarding houses in the region. Every effort is made to reduce to a minimum the expenses of the patients who wish to avail themselves of the advantages of the institution. The regular charge—five dollars (or one guinea) a week—is made to all alike, and includes everything except laundry and medicines, which are furnished at cost. No charge is made for medical attendance, and there are no accommodations for private patients.

The deficiency in the running expenses is made up each year by subscription. An attempt to place the institution on a firm financial basis has also been made; and, principally by personal appeal, an endowment fund of 120,000 dollars (£24,000) has already been secured, which it is hoped, by bequests and subscriptions, may some day grow sufficiently to assure the permanence of this work for all time.

The sanitarium also has a small free bed fund, the income of which is applied to defray the expenses of patients whose resources have entirely given out. Last year twenty-one were maintained for varying periods of time without charge, and twenty others had their expenses paid by benevolent persons interested in the work.

Since the wards of general hospitals in the past had shown that aggregation is a real danger to the consumptive, the cottage plan was adopted from the first, in spite of the greater cost of building and operating an institution on this plan, although the germ origin of tuberculosis was not as yet generally accepted. The new light thrown by science on the infectious nature of the disease, and an experience of fourteen years in developing a sanitarium on this plan, have but strengthened my confidence in this method of construction, which represents an attempt at segregation, separates patients as much as possible from one another, and affords each individual so large an air space as to make it difficult, when rigid precautions as to the care of the expectoration are enforced, for the buildings to become contaminated. Besides, it affords patients a regular walk to and from their meals, which are served in the main building, encourages them to lead an out-of-door life, and allows them to select as companions those who are congenial to them and to avoid unnecessary contact with those who are not.

The cottages of the Adirondack Sanitarium are one-story buildings, which accommodate from two to ten persons each; but the greater number have a capacity for four or five inmates only, and these have been found the most satisfactory. Each patient has his own room, which opens into a central sitting-room in direct communication with the veranda, on which the out-door plan of treatment is carried out, a good shelter from the prevailing winds being secured by means of a single glass screen. The partitions between the sleeping and general sitting-rooms reach but seven feet from the floor, an arrangement which gives the patient the benefit of the entire air space of the cottage, and allows of it being heated by a single fire-place or stove situated in the central sitting-room; but the walls which separate the sleeping-rooms from each other reach to the ceilings, and are of solid construction. Good ventilation is insured by transoms located over the front veranda. In the main or administration building are to be found the dining-room, kitchen, reception and general sitting-rooms, superintendent's and doctor's offices, rooms for servants and nurses; while the upper floor of the building is

devoted to large rooms to a limited number of patients. The library, recreation pavilion, doctor's cottage, chapel and infirmary are all separate buildings. Should any patient in one of the cottages become rapidly worse or be taken suddenly ill, he is at once removed to the infirmary, where every convenience for his care and proper treatment is at hand. The separation of those who are failing rapidly, or are acutely sick, from the comparatively well not only furnishes the former with the constant and necessary attention and nursing which they require, but withdraws them from the daily observation of their more fortunate cottage mates, and prevents in these the depression which would otherwise occur from the contact of the very sick. The success of this plan is attested by the general cheerfulness of patients while in the institution, who, contrary to what might be supposed, are very rarely depressed in spirits at their enforced exile.

The efficacy of the cottage plan, when combined with rigid measures for the care of the expectoration, in protecting the patients from the dangers of infection, has been well shown by the experience gained at the sanitarium. A study of the dust of all these buildings, by Dr. Irwin H. Hance, indicated that, with one exception, the dust taken from these cottages failed to infect guinea-pigs when injected subcutaneously in these susceptible little animals, although the buildings had been inhabited by consumptives for many years. The exception was a small cottage accommodating but two patients, one of whom had already been reported for carelessness in the matter of expectoration. Additional evidence bearing on the protection against infection afforded by the methods in use at the sanitarium is furnished by the significant fact that during fourteen years not a single employee has been known to have contracted tuberculosis in the institution.

It has been objected by some, familiar with all the foreign sanitaria which are not on the cottage plan, that this method of construction makes it impossible for the patient to be under the constant supervision of the physician. To my mind, however, this objection has but little weight when applied to an institution which treats only early and favorable types of pulmonary invalids, because almost all these patients are so well as not to require such constant supervision, and those who are in need of it are placed at once in the infirmary, where they are constantly under the physician's and nurse's eyes. Indeed, the infirmary should represent on a small scale the ideal foreign sanitarium, with its nurses, conveniences, and many appliances for treating the more advanced and acute types of the disease. But at the Adirondack Cottage Sanitarium the number of this class of patients is limited to those who are suffering from some of the accidents incident to the disease, or who have grown worse while in the institution. The only valid objection which I know of to the cottage plan is the greater expense entailed in constructing and operating so many detached buildings.

As a laboratory for bacteriological work seemed an indispensable requisite of the outfit of such an institution as the sanitarium, the Saranac Laboratory was established in 1894 in connection with the institution. Besides the valuable aids which laboratory methods bring to the study of the disease and the diagnosis of obscure cases, it is to these methods that we must look in future for much needed light upon many of the still unsolved problems relating to etiology, prophylaxis and disinfection, and through their application only can we reach satisfactory conclusions as to the real value of many of the specific methods of treatment which are constantly proposed, or make any advances in the development of such methods.

In combating tuberculosis, however, we must at present rely on prevention and the early detection of the disease. Familiarity with the results obtainable by sanitarium methods emphasizes the importance of an early diagnosis and a prompt resort to radical measures.

Rigid rules as to the selection of suitable cases for treatment are by no means easy to lay down in a disease which runs so irregular a course. The first rule is to make as early a diagnosis as possible, for the earlier the diagnosis is made the better will be the prospect of effecting a cure or arresting the progress of the destructive process. The first few months after the onset of the disease present often the one golden opportunity of re-establishing the balance of health, and many lives are constantly sacrificed by the neglect of this opportunity. If the curability of the earlier stages of tuberculosis could be more generally accepted, and for this reason the grave responsibility which rests on the physician in making an early diagnosis better realized, the patient's best chances of recovery would not be so constantly sacrificed.

The apathy of the profession as to the importance of making an early diagnosis seems almost incomprehensible, and would indicate that the general opinion held is that climatic and sanitarium treatment should be advised only as a last resort. The microscopical examination of the expectoration, instead of being repeatedly applied as soon as any expectoration is obtainable, is very generally neglected, or only resorted to when the symptoms have become unmistakable, in order to confirm the diagnosis.

Fourteen years ago but few really incipient cases presented themselves for treatment, and the earlier stages of the disease were generally labelled pleurisy, bronchitis, or malaria, until hemoptysis, rapid emaciation, marked hectic or cavity signs appeared. But the microscope and the light which had been thrown on the etiology of pulmonary affections by the discovery of the germ origin of tuberculosis, and the variety of its many manifestations, have already wrought some change for the better in this direction. The occurrence of slight hemoptysis as an initial symptom, and before any constitutional impairment is noticeable, should be a most fortunate event for the patient, and

in many cases proves to be the first symptom of pulmonary tuberculosis. Such an occurrence makes imperative a most careful study of the rational and physical signs, together with a microscopical examination of any expectorated blood or sputum obtainable from the patient. Unfortunately, he is too often lulled into a false, and to him a most acceptable, sense of security, by the verdict that it is nothing—that the bleeding came from his throat or his stomach—and he continues his usual mode of life until a more alarming hemoptysis or the occurrence of constitutional impairment makes the nature of his malady evident.

The fully developed chest or comparatively robust appearance of many patients with early tuberculosis often proves misleading to the examiner, and induces him to relax his vigilance, to minimize the symptoms, and to wait for further developments. Too great reliance is, perhaps, placed on the physical signs alone, which at first may be either absent or can be detected only by a trained ear, and too little importance is attached to the study of the history and the rational symptoms. In insidious cases lassitude, some loss of appetite, a little quickening of the pulse-rate, a temperature reaching occasionally 99.5° to 100° at irregular intervals, with or without slight loss of weight, are a group of symptoms which usually attracts little attention, but which should be regarded with suspicion. And if, in addition to these, morning pallor, disappearing towards evening, some cough, prolonged expiration, or even impairment of vesicular murmur, are noted, the patient should be closely watched, every effort made to obtain more positive evidence; and if it is not obtainable otherwise, the aid of laboratory methods in helping to clear up the diagnosis should not be neglected. If there is expectoration, and the presence of the bacillus cannot be detected by repeated and thorough examinations, a positive conclusion can often be reached within three weeks by inoculation of the expectoration in the guinea-pig. A careful examination with a good X-ray machine and the fluoroscope will often confirm the diagnosis by showing the diaphragm to be higher on the suspected side, or its excursion diminished on one or both sides, and in many cases a slight shadow can also be detected at the site of the suspected lesion.

If additional or more conclusive evidence is required, the tuberculin test should be applied. By a resort to this test a positive opinion one way or the other can often be reached; and if the initial dose does not exceed one milligramme, the constitutional disturbance caused by it is slight, and no injury to the patient has, in my experience, ever resulted from such a test in the cases in which it has been necessary to employ it. I usually inject one milligramme at bedtime, and as the reaction should appear in from eight to sixteen hours, a two-hourly record of the temperature, beginning early in the morning of the following day, will show if any fever is present and indicate its character. If

no effect is produced, I wait three days, and inject three milligrammes at bedtime, and, if the result is again negative, a last dose of five milligrammes after another interval of three days. It is rarely necessary or advisable to go beyond this. The value of the tuberculin test in shedding light upon obscure cases of suspected tuberculosis, whether pulmonary or surgical, has not yet been generally realized.

As soon as the diagnosis of tuberculosis is established, particularly if the bacillus has been demonstrated in the expectoration, no matter how well the patient may appear, he should at once be told the grave nature of his malady, and an immediate removal from his surroundings should be urged, while it is explained to him that the best and possibly the only chance of restoration lies in prompt action and the adoption of thorough measures. Although obedience to this advice undoubtedly necessitates great sacrifices on the part of the patient, he will, if it is at all possible, rarely hesitate to make them, provided the gravity of the situation is plainly laid before him and the necessity for prompt action explained; and if this is not done, he will be called upon to make the same sacrifices later, and when they can prove of little or no avail.

The position physicians take who purposely deceive patients as to the nature of their malady by telling them the bleeding comes from the throat, or that they have influenza, malarial disease, or bronchitis, is difficult to understand, and does the patient a grave injustice.

It will be justly urged that in a great majority of cases among the poorer classes it is absolutely impossible for the patient to follow the advice given. This is greatly to be regretted; and while it in no way relieves the physician of the responsibility of making an early diagnosis, and advising prompt and radical measures to those who can afford to follow his advice, it is a strong plea for attempting to provide sanitaria for a greater number of these unfortunates, where they can find at a moderate cost the climatic and hygienic surroundings necessary for the treatment of their disease as soon as its presence is recognized.

The principal aim of the modern sanitarium treatment of tuberculosis, which can only be briefly outlined here, is to improve the patient's nutrition and increase his resistance to the disease by placing him under the most favorable environment obtainable. The main elements of such an environment are an invigorating climate, an open-air life, rest, coupled with the careful regulation of the daily habits, and an abundant supply of nutritious food, with the exhibition of such restoratives and tonic measures as may be indicated in each case. A discussion of the advantages of various climates will not be considered further than to call attention to the fact that for truly incipient cases the more tonic and colder climates seem indicated by the comparatively good condition of the patient; and this view is strengthened by a study

of the influence of cold on the weight of the patients at the Adirondack Sanitarium, the average gain in weight every year being greater during the autumn and winter months than in the spring and summer.

The invigorating influence of a life spent constantly out of doors for many months can hardly be overrated. To remain, in most cases, the greater part of the time quietly sitting, well wrapped up, out of doors in all weathers, is one of the main duties imposed upon every patient at the sanitarium, and, irksome as such a course would at first seem, it is, in a majority of cases, faithfully carried out by them after their timidity and prejudices as to its danger have been gradually overcome by the benefit derived in their own persons. This constant exposure to atmospheric influences in so severe a climate as that of the Adirondacks at all temperatures and in any weather, proves the best possible stimulant to the assimilative powers of the patient whose life has been almost entirely spent in close and overheated rooms, and has, in my experience, been free from danger when intelligently applied. Patients but rarely suffer from colds or intercurrent attacks of bronchitis, and only one case of lobar pneumonia has occurred at the sanitarium among the hundreds treated there during the last fourteen years.

Besides warm clothing in winter, protection from the wind is the only requisite for this treatment, and a good shelter is obtained by a single glass or wooden screen placed on the exposed side only, the usual glass-enclosed piazza being an abomination never allowed. The out-door method is applied to all patients, but the details of the treatment, and, above all, the amount of exercise allowed in carrying it out, are regulated by the activity of the patient's disease, his nutritive condition, and more especially his temperature record. Thus, the few infirmary cases who may be suffering from progressive tuberculous processes or cheesy pneumonia, and running high temperatures, are carried out doors daily, and kept there in a recumbent position in bed or on a lounge the greater part of the day, while those who have less fever and are improving are allowed to sit up in steamer chairs on the veranda and to walk about the infirmary, but not to go over to their meals in the main building until their temperature record and improved condition warrant it, when they are returned to their cottages. In the class of cases which is represented by the inmates of the cottages, the temperature rarely goes above a hundred in the afternoon, or they are entirely apyretic. The former are ordered to remain quiet out of doors during the afternoon, when slight fever is apt to occur; and to walk to their meals in the main building, but not to go off the grounds; while the apyretic cases are generally allowed, so long as they live out of doors and obey rules, to go where they please and, while under daily observation, to take as much exercise as their condition seems to render permissible.

It is much better, however, always to err on the side of over-caution in prescribing active exercise to tuberculous patients, and I feel confident that many lives are constantly sacrificed to a deep-rooted and very general misconception which exists in the lay, and to a great extent to the professional mind as well, in regard to the advantages of active exercise in this disease. If there is any one rule that should be generally applied to the treatment of tuberculosis, it is, that when any degree of fever is present the course of the disease will be injuriously affected in direct proportion to the amount of active exercise the patient is allowed to take. Still further, I constantly see an apparently quiescent and arrested process fanned into renewed and often uncontrollable activity by one single over-exertion.

This position in regard to exercise may seem rather an ultra one, but it has been amply sustained by abundant and unfortunate experience in this direction. What is but moderate exercise for a man in health means over-exertion and exhaustion to the phthisical invalid. To see a man with a daily afternoon temperature of 101° to 102°, and a pulse above one hundred, trying to gain strength by rowing a boat, riding a bicycle, or attempting to climb a mountain, as he is often advised to do, and to note the baneful effect of this course on his disease, will prove more convincing than any form of argument. Absolute rest, so long as it is taken in the open air, is the best measure at our command to reduce the pyrexia of tuberculosis and to conserve the patient's energies, and should be persisted in for some time after the afternoon fever has ceased to be present, moderate exercise again being allowed only with caution.

At the sanitarium the utmost attention is given to the alimentation of the patient, and every attempt is made to induce him to take and digest as much nourishing food as possible, but the details of this part of the treatment cannot be entered into here.

Alcoholics are never prescribed in early cases as a part of the treatment.

Little stress is laid on the administration of drugs except when necessary to relieve symptoms, but cod liver oil, the hypophosphites, and arsenic are very generally made use of. Creosote is prescribed in small doses only, and in cases where cough and profuse expectoration seem to indicate its administration, or where its tentative use has been shown that it improves rather than impairs the patient's appetite and digestion.

Tuberculin* treatment has been employed for the past seven

*Koch's original tuberculin was used at the sanitarium for a year after the announcement by this investigator of this new method of treatment. From that time, however, all the tuberculin has been produced at the Saranac Laboratory, and has been modified according to the indications which the latest researches on this subject seemed to call for. For several years a tuberculin made like Hunter's modification B. was principally in use. The general plan of separating the albumoses from the culture fluid laid down by Hunter was adopted, except that no heat was used at any time in the process.

Before making an extensive trial of Koch's new TR tuberculin, it was thought best to study this substance in the laboratory. The researches made there by Dr. E. R.

years with the utmost caution, and in selected cases only, in order that some evidence as to its specific influence when given under the most favorable conditions of environment might be obtained. Its use has been found inadmissible in the active types of the disease, and its administration in large enough doses to produce repeatedly marked reactions inadvisable and even injurious. In the apyretic types of the disease, when the patient's nutrition is good, if given in very small and very gradually increasing doses, so as never to produce any marked rise of temperature, its use has been found free from danger, and the proportion of recoveries in the patients treated has been encouraging. In such cases, if the treatment be extended over a period of from six to eight months, the dose may be gradually raised from the equivalent of a tenth of a milligramme of Koch's tuberculin to so large an amount as a hundred milligrammes without causing any marked reaction. As the cases, however, in which this treatment seems permissible are likely to do well under the ordinary climatic and open-air treatment alone, little evidence as to its curative value can be claimed from their recovery. The injections, nevertheless, seem to have had a favorable influence in preventing the natural tendency of this disease toward relapse, which occurs in many who recover under climatic and hygienic methods alone.

An attempt has been made to trace as many as possible of the patients treated by this method who have been discharged as cured in the past seven years, in order to determine whether or not tuberculin treatment has any influence in preventing relapse. The result was as follows:

Not traced	8
Remained well	36
Relapsed (living)	4
Relapsed (died)	3
Died of insanity	1
Died of alcoholism	1
	53

Unfortunately, it is impossible to determine positively whether this apparent immunity to relapse is the direct result of the tuberculin treatment, or whether the tolerance to large doses of tuberculin shown by these patients indicates that from the first their tuberculosis was of a subacute or benign type.

The exact results obtained by the combined climatic and sanitarium treatment are difficult to express in figures, because

Baldwin and myself showed that samples of TR, as it was first put on the market, contained living tubercle bacilli, and for this reason the substance as then produced was considered as unsuitable for the treatment of human tuberculosis. Dr. Baldwin has also recently shown that, although the directions accompanying the new bottles of the new TR tuberculin state that it contains ten milligrammes of solid substance, if the water and glycerin be evaporated only about four milligrammes of solid substance remain.

During the past year Hahn's tuberculo-plasmine made after the method of Buchner and Hahn, of crushing the bacteria with excessive hydraulic pressure, has been used in a limited number of cases.

these results are greatly influenced by the class of cases accepted for treatment, and the classification of these cases is necessarily purely arbitrary. Many cases, no doubt, would be classified by one physician as incipient, by another as advanced, according to the views held by each as to the disease and the personal bent of the individual. In addition, the term *cure* can also be used only in a relative sense. Of late the results obtained have been better than formerly, and this is due, no doubt, not only to the improvements in methods and plant, but to the fact that more really favorable and early cases are available than formerly.

In making out the yearly reports of the institution I have adopted and printed in each report the following classification, imperfect as I feel it to be, as the best I could devise to express the class of patients treated and the results obtained. An idea of the best results thus far attained can perhaps be gained by a glance at the following table copied from the last two annual reports, of 1897 and 1898, provided the figures are considered together with the classification adopted. Patients who have remained less than three months are put into a separate class, as little can be accomplished in the way of permanent results by so short a period of treatment:

203 Patients Who Remained an Average of 9 Months.

Condition of patients when admitted.	Apparently cured.	Disease arrested.	Improved.	Unimproved or failed.	Died.
75 Incipient cases	55	16	2	2	0
84 Advanced cases	15	38	19	11	1
44 Far advanced cases..	0	7	19	13	5
203 Total	70	61	40	26	6

Definition of Terms Employed.

(1) *Incipient.*—Cases in which both the physical and rational signs point to but slight local and constitutional involvement.

(2) *Advanced.*—Cases in which the localized disease process is either extensive or in an advanced stage, or where, with a comparatively slight amount of pulmonary involvement, the rational signs point to grave constitutional impairment or to some complication.

(3) *Far advanced.*—Cases in which both the rational and physical signs warrant the term.

(4) *Apparently cured.*—Cases in which the rational signs of phthisis and the bacilli in the expectoration have been absent for at least three months, or which have no expectoration at all, any abnormal physical signs remaining being interpreted as indicative of a healed lesion.

(5) *Arrested.*—Cases in which cough, expectoration and bacilli are still present, but in which all constitutional disturbance has disappeared for several months, the physical signs being interpreted as indicative of a retrogressive or arrested process.

It will be seen at a glance that of the forty-four patients classified as far advanced not a single one recovered, while of the seventy-five who represent the very earliest stage at which the disease can be detected, fifty-five, or 73.5 per cent., were apparently cured; and the importance of making an early diagnosis, and of the immediate application of radical measures is strongly emphasized by this experience. No doubt some of the apparently cured patients suffer more or less severe relapses, but the majority do not.

The education which the patients receive at the sanitarium, as to the nature of their disease and the methods to be relied upon in combating it, is of the utmost value to them in enabling them to care for their health and avoid relapses after they have left the institution.

Conclusion.

From an experience gained during many years in the practical application of sanitarium methods in the treatment of pulmonary tuberculosis, the following conclusions have been reached:

Tuberculosis, if detected in its earlier stages, is curable in a large proportion of cases.

It is of vital importance, therefore, that the diagnosis be made early.

The best results in treating incipient tuberculosis are obtainable by the open-air treatment in special sanitaria situated in good climates.

The best plan of construction for such sanitaria is the cottage plan or some of its modifications.—*Practitioner*, (English).

A. McP.

THE SERUM TREATMENT OF DIPHTHERIA IN THE NEW YORK FOUNDLING HOSPITAL DURING 1898.*

BY W. P. NORTHRUP, M.D., OF NEW YORK.

During 1898, 103 patients with diphtheria were treated with antitoxin at the New York Foundling Hospital, with 13 deaths, a mortality of 12½ per cent. The diagnosis was confirmed by bacteriologic cultivation in pharyngeal cases. Laryngeal cases to the number of 12 have been included, in which on one cultivation the bacteriologic report was negative. It is stated by Health Board experts that frequently such cultures taken from the pharnyx are negative, while at the same time the lesion has been proved to be

*Read before the New York Academy of Medicine, February 16th, 1899.

laryngeal diphtheria. Two of these patients required intubation, but all recovered. Experience at the Foundling Hospital leads the writer to believe that these cases may fairly be considered diphtheritic. Rejecting these twelve cases altogether leaves a mortality of 14 per cent., which figure we may consider very satisfactory.

	Cases.	Deaths.	Per cent.
Pharyngeal	67	4	.06
Laryngeal	36	9	.25
Total	103	13	.12½

Statistics of immunity are not easily compiled. The strongest statement that can be made from the Foundling Hospital is that there have been so few cases as 103 (most of these patients even being brought in from the out-patient department) and that we have within two years (see *Medical News*, December 25th, 1897), passed through an epidemic of measles without having a single fatal complication of diphtheria.

The antitoxin used in recent years has been that made by the Health Department of the City of New York. There have been no antitoxin joints, no pains, and transient rashes in (estimated) only one-fourth to one-third of the cases. These have been of so little moment as not to be recorded in the histories. As an immunizing agent it has attained the highest ideal of therapy; it has preserved most lives, and preserved them intact.

In many ways the Foundling Hospital is a favorable place in which to test antitoxin. Greater New York thrusts into our care a large proportion of poorly developed new-born infants. Five of the thirteen fatal cases occurred in children under one year of age, and ten in those under two years; five patients that died were under one year of age; five were between one and two years, and three were between two and three years.

Finally, I submit that 12½ per cent. fatality in infant foundlings is an extremely good result; that in immunizing, antitoxin has attained even higher, almost ideal results.—*Medical News.*

A. McP.

The Medical Profession of Chicago.—A curious feature of Chicago (medical) life is the willingness of the doctors to impart their knowledge to others. According to the catalogues issued in 1898, there are in that city 572 men who hold full "professorships" in colleges of acknowledged good standing—not to mention those in ill repute; 328 who are "instructors, assistant professors and demonstrators"; and 96 other than these who are clinical workers in college dispensaries! A total of 996 engaged in active college work! There can be no question that nowhere else on this globe can a showing one-fourth as great be made. Truly Chicago is to be the great "medical centre" of the world.—*Amer. Jour. of Surg. and Gynec.*

Surgery.

IN CHARGE OF . . .
BRUCE L. RIORDAN, M.D., C.M.,
AND F. N. G. STARR, M.B.

OPERATION FOR CANCER OF THE BREAST.

WATSON CHEYNE (*Lancet*, March 18th, 1899) makes a further statement as to results obtained by operation for cancer of the breast. At the time of his publication of the last series there were 21 cases in which 3 years or more had elapsed since operation. In 9 of these recurrence had taken place, while 12 (57 per cent.) had remained well for over 3 years. Of the 12, one died of bronchitis; of the remaining 11, nine are still alive and well more than 6 years after operation, one having been lost track of, and the other is reported to have died of hemorrhage from a cancer of the intestine.

In his other series in which the 3 years had not elapsed, there were 40 cases; of these at that time 10 had shown signs of fresh disease. Of the remaining 30, one had died of the operation, two had been lost sight of, and 27 had had no recurrence. Of these 27 at the present writing 18 are still alive and well, and one died without recurrence. "In other words, of the 37 who lived after operation and the fate of whom can be traced, 19 or over 50 per cent. remained free from recurrence, 16 certainly had recurrence. . . This gives a total in the 61 cases of 30 patients who remained free from recurrence, 29 of these having passed the three-year limit, one died from operation, and three having been lost sight of. The results therefore in cases where they are ascertainable, are about 51 per cent. of successes—*i.e.*, of patients remaining alive and well for over three years."

Up to the end of 1897 he had added 38 fresh cases to his series in which from one to three years have elapsed since operation. Of these, "26 patients remained well without recurrence; one refuses to say how she is, but appears well; in one the result is unknown; one died suddenly about a fortnight after operation, seven died of recurrence; one (in whom there had been recurrence) has probably died; and one (in whom there had been a slight recurrence) has been operated upon and appears well. The total is 99 cases in which from one to nine years have elapsed since the operation, and of these 56 certainly have as yet had no recurrence."

As to methods, he condemns the preliminary exploratory incision, and lays down the rule that "in the case of an exploratory operation, the suspected swelling should *be excised along with an area of apparently healthy tissue around*, and it should only be cut into

after its removal from the body and from the vicinity of the operation. He insists upon the "free removal of skin," notwithstanding the fact that there may be subsequent difficulty in closing the wound. The idea is to remove all tissue in which there is a possibility of infection. The entire breast and all its lobules must be excised. As to the fascia, he removes all of the pectoral fascia, together with a superficial layer of the muscle, so as to insure the removal of the fascia and the lymphatic vessels. The fascia over the pectoralis minor should also be removed, including the costo-coracoid membrane. Halstead removes both muscles as well, but Watson Cheyne's results are just as good, hence the removal of the entire muscle hardly seems necessary. The glands and lymphatic vessels should be removed well up into the axilla. This may be done when the lower part of the major muscle and the overlying breast have been detached, and turned forward; the fascia is dissected off the serratus magnus along with its superficial fibres, and then separated from the latissimus dorsi, and thus the whole of the fat and glands in the lower part of the axilla are raised in one mass up to the level of the vessels. After the front of the axillary vein has been well cleared, the vessels and nerves are lifted up and the glands and fat which run up toward the posterior triangle of the neck, are cleared out. As to the after treatment, instead of fixing the arm to the side, he fixes the arm at right angles to the chest by means of a spinal splint. By keeping the arm out from the side, he thinks a good deal of the contraction which usually follows these extensive operations, is avoided. He concludes his most interesting paper as follows: "Taking the results which I have given in this paper along with the results obtained by Halsted, Butlin, and a variety of other operators, I think that we are justified in drawing the following conclusions: 1. Taking cases of all kinds together, not merely selecting favorable cases for operation but operating on all cases in which operation is possible with the exceptions which I have already mentioned, we may, I think, reckon that about 50 per cent. of the patients will remain free from recurrence if the operations are carried out on the lines laid down by Heidenhain and Stiles. 2. That even in the cases which do recur recurrence is considerably delayed and the patient enjoys a considerable interval of good health. 3. That the repeated operations which take place after the old operation are now very rare, recurrences when they do appear being usually in inoperable situations. 4. It will be evident from my results that the chance of recurrence is extremely slight after these extensive operations in patients who have remained well for from one to two years, and after three years there is only one example in my list of fresh cancer, and in that case there is no evidence that that was one of recurrence of the original disease rather than a fresh development. 5. I may add my firm conviction that *the patient's chance lies in the first operation.* If this fails, either from imperfect removal of the disease or on account of the extent

of the disease in the first instance, further operation, however extensive, is seldom successful. This is my experience. I see a good many cases which have been operated upon elsewhere and in which recurrence has taken place, especially cases in which the old operation has been performed, and in the few in which I have been tempted to give the patients another chance by an extensive operation the results have been almost uniformly disappointing. Where a cancer is quite small patients and practitioners are very apt to be content in the first instance with a small operation, thinking that if recurrence takes place an extensive removal can be performed afterwards. This is, I am satisfied, an utter fallacy, and the performance of a partial operation in the first instance takes away the patient's best, and often her only real, chance of getting rid of the disease." F. N. G. S.

Furuncle.—*Treatment:* Furuncles are always caused by infection from the surface, usually along the hair-follicles. In order to prevent general furunculosis, the surface of the boil should be washed with a one to five hundred solution of mercuric chloride, the washing being extended for some distance around the primary abscess. The application should be made at least twice daily, and, after rupture or incision, the abscess-cavity should be carefully irrigated with a weak mercuric-chloride solution.—H. H. STONER, *Medical News*, January 14th, 1899.

The Invention of Spectacles.—Who first invented spectacles? These aids to vision appear to have come into use about the fourteenth century. The earliest reference to them is in the work of Bernard Gordon, Professor at Montpellier, who speaks of a collyrium devised by him which allowed a person to read without spectacles. In 1360 Guy de Chauliac in his treatise on surgery refers to the use of lenses. The invention of spectacles is sometimes attributed to Roger Bacon, who died in 1294. Further research, however, has shown that in 1285 Savino degli Armati, a Florentine, worked glass into the form of a lens as a help to vision. For him, therefore, may justly be claimed the honor of having invented spectacles. He died at Florence in 1317, and was buried in the Church of Santa Maria Maggiore. On his stone is the following inscription:

QUI GIACE
SAVINO DEGLI ARMATI
DI FIRENZE
INVENTORE DEGLI OCCHIALI
DIO GLI PERDONI LE PECCATA
ANNO D MCCCXVII.

(Here lies Savino degli Armati, of Florence, inventor of spectacles. May God forgive him his sins! A.D. 1317.)—*British Medical Journal.*

Oral Surgery.

IN CHARGE OF
E. H. ADAMS, M.D., D.D.S.

CALCIC WASTE IN PREGNANCY.

At the union meeting of the Maryland State Dental Association, Washington City Dental Society, and Virginia State Dental Association, Dr. W. A. Montell, Baltimore, read the following paper on the above subject:

Every dental practitioner has had brought to his attention the old adage, "For every child a tooth," and while attempting during his professional career to combat the fallacy of such a necessity, has been forced to admit that during the period mentioned there has usually been a loss of the calcic material of the mother, which has been more or less evinced by the destruction of dental tissues and the impairment of fillings which we have viewed with pride.

In 1887 the writer was led to make some investigation looking to amelioration of these conditions, and submits the results, asking the members to draw their own deductions from the facts submitted. Mrs. T., mother of two children, was under his care for dental services, and stated that she desired nothing permanent done, as in a few months she would be confined and would have to lose one or more teeth before the fulfilment of her time.

The writer combated the idea, and prescribed for her a tablespoonful of lime-water three times a day internally, and an alkaline wash of sodium bicarbonate and water twice a day. The child was safely born, and, like the others, a boy, but, unlike the others, whose temporary teeth were apparently frail, the last one, who has been with the others frequently under the writer's care, had dental organs of a character far superior to the first two, and the mother lost neither a tooth nor filling during the period of gestation.

Mrs. L., whose husband informed the writer that his wife was *enciente*, was given the same treatment, with similar result. She was the mother of four children previously, all of whom suffered from caries of their deciduous teeth, while the fifth was observed by the writer within the last year, and such teeth as were still retained showed no symptoms of caries, while those which had been removed by the usual physiological process were perfect except the usual absorption of the roots.

Mrs. A., to whose husband the writer suggested the treatment, used syrup of hypophosphites internally, and lime-water as a wash during pregnancy. She is the mother of two children, and shows the loss of dental structure herself, while the children, now four and six years old, have perfect teeth. There are nine more cases

of similar results which the writer has carefully recorded, but the data obtained therefrom are not sufficiently complete to give in this paper.

While wishing to allow his professional brethren to draw their own conclusions, the writer wishes to record a few of his own views as deduced from the cases cited, viz., that undoubtedly there exists a good and sufficient ground to believe that during pregnancy there is an unusual strain upon the system of the mother for the construction and maintenance of the fetus, whose supply of nourishment is derived solely from the maternal source. That during this period, the osseous structure of the mother being deprived of its usual pabulum, which is diverted for the purpose of the fetus, the secretions of the body and the condition of the blood are less alkaline than usual, and thus produces the chemical solution of the teeth; for the writer observed that the ravages of the structure of the teeth at this time appear to differ somewhat from the usual phenomena of caries, showing the effects of simple decalcification by acids on extracted teeth. And if the secretions of the various organs are, as we all well know, decidedly acid during this period, there must be a heavy strain and demand upon the system for such calcic constituents as are required during a normal condition; and the results of the writer's observation lead him to believe that we can supply this calcic material in a readily assimilable form through the use of lime-water and kindred preparations, not only preventing the usual loss of dental structure on the part of the mother and replenishing the strain upon her resources, but we can by this method give that foundation for the future dental organs of the fetus so much to be desired.

Discussion.

Dr. C. Lenox Curtis, New York, said that the paper was of interest to all dentists because they were responsible for the condition of the dental organs of their patients; but they are not often in as good a position to give advice as to precautions to be taken as physicians are. The speaker emphasized the necessity of supplying lime to the system, but treatment should go beyond this and build up the whole system and create a healthy state, in which there would be a natural appetite for such foods as contain an abundance of lime-salts. If a supply of lime can be gotten from regular foods, it is better than to administer it as a medicine.

E. H. A.

THE RELATION OF DISEASES OF THE TEETH TO THE CHRONIC SWELLING OF THE LYMPHATIC GLANDS.

Among three thousand one hundred and sixty-one children with swellings of the glands were two thousand three hundred and thirty-four, or seventy-eight and eight-tenths per cent. who had bad teeth of the third or fourth degree in the lower jaw. With one thousand six hundred and forty-six, or seventy per cent. of

these children, the bad teeth, with regard to their position, intensity of illness, etc., corresponded exactly to the position and the degree of the swelling of the glands; with six hundred and eighty-eight, or twenty-nine and five-tenths per cent. the bad teeth and glands did not agree, or partly only. The third table proves that more than half of all the teeth made responsible for any swelling of the glands, had still a living pulp. The author states the summary of the result of his work in the following sentences:

1. Bad teeth, carious ones especially, play an important part as etiological factors in swellings of those lymphatic glands in the regions of which the teeth are situated.

2. As long as the caries is limited to the enamel and dentine of the tooth, without influencing the pulp, there is no swelling of the gland to be feared.

3. If the pulp is deprived of its epithelial protection, which consists of the enamel and dentine of the tooth, there is the possibility of a swelling of the lymphatic gland through the medium of infectious or otherwise injurious matter.

4. Not only dead teeth with open cavity and root canals must be considered the entrance way for infectious matter, but also the teeth, the pulp of which is still alive, if exposed to the injurious influence of outer contact.

5. There are no lymphatic capillaries and no lymphatic vessels existing in the pulp, and yet the pulp possesses the capability of absorption.—Dr. H. Korner Hale, in *Items of Interest.*

E. H. A.

A CASE OF ALVEOLAR HEMORRHAGE CAUSING DEATH.

REPORTED BY GEORGE RANDORF, BERLIN, GERMANY.

Mr. E., who suffers from hemophilia, after extraction of a molar, suffered from bleeding of the gum and the alveolus of the upper jaw. Having applied various well-known remedies without success, he went on the second day to his doctor, who succeeded in partly stopping the bleeding.

The mouth, after it had been thoroughly cleansed, was found in the following condition at two o'clock on the same day: The mucous membrane had become sore through chloride of iron and other means which the patient had applied himself in a rather concentrated solution, and was strongly inclined to bleed.

By means of the electric cautery the doctor succeeded in stopping the bleeding, and sent the patient away, recommending him to use all possible measures of precaution.

In about an hour the packing was again soaked with blood. Unfortunately the alveolus, or rather the gum behind the second molar, began to bleed also. Whenever the packing or its substitute touched the bleeding spot, the bleeding became more profuse in consequence of the inclination of vomiting which overcame the

patient. The doctor tried to stop the bleeding by applying hot water and steam, iron chloride packing, turpentine oil, antipyrin, ergotin and secale, bags of ice, but without result. A vulcanized rubber plug could not be made, because no exact cast could be taken. Nor could two other doctors consulted master the bleeding. A solution of pure salt was three times administered to the patient as a substitute for the loss of blood. On the eighth day the patient died in consequence of the bleeding.

It is noteworthy that the same patient some time before had himself pulled out a loose premolar and that the bleeding ceased spontaneously after two days.—*Items of Interest.* E. H. A.

Appointment of Dental Surgeons in the Army and Navy of the United States.—Mr. Hull, of the National House of Representatives, has brought in a bill for the reorganization of the army of the United States, and other purposes. Section 11 provides for the appointment of "one hundred dentists."—*Dental Cosmos.*

Does License to Practise Medicine Permit the Practice of Oral Surgery?—A curious case for medico-legal decision has arisen in the State of Rhode Island, where registration for medical practice is granted upon application of the State Board of Health, by graduates of recognized medical colleges, while dentists are required by a recent enactment to pass an examination before the State Board of Registration in dentistry. A graduate of dental surgery, and in medicine, after being registered by the State Board of Health and securing his license, engaged in the practice of medicine, including dental and oral surgery. He was forthwith arrested for infraction of the law requiring examination and license for the practice of dental surgery, and the case now awaits judicial decision. —*Dominion Dental Journal.*

Caries of the Teeth and Diseases of the Stomach.—Aaron (*Charleston Medical Journal*, October, 1898) states that caries is produced by the acid fermentation set up by micro-organisms. Over twenty-two kinds of germs, concerned in caries, have been isolated. The empty stomach always contains germs, and, contrary to the general belief, the HCl of the gastric juice, while inhibiting up to a certain degree the process of fermentation, does not completely destroy the germs in the stomach. When caries exists, some of the germs from the teeth may become incorporated with the food, enter the stomach and there develop, giving rise to various disturbances. The multiplication of the micro-organisms and their products induce a state of hyperemia, and then a hypertrophic condition of the mucous membrane of the stomach, which becomes covered with a heavy, viscid, ropy, tenacious mucus. The food is not digested and acts as an irritant. The proteolitic process yields to fermentation. It must be remembered that not all micro-organisms that excite inflammation are pyogenic. Germs which usually produce pus in interstitial tissue, developing on mucous membranes, only produce a chronic inflammation. E. H. A.

Pharmacology and Therapeutics.

IN CHARGE OF
A. J. HARRINGTON, M.D., M.R.C.S.(Eng.)

PRESERVATIVES.

Alcohol.—Most common preservative and solvent, it enters into the composition of nearly all our official solutions. The germination of most of the micro-organisms occurring in aqueous solutions of vegetable or animal substances is inhibited by the presence of 20 per cent. by volume of absolute alcohol. It is in no way germicidal, as on evaporation the anesthetized germs readily take up life and propagate.

Glycerine, a good solvent, has a curious preservative action over some inorganic substances by preventing oxidation.

Salicylic Acid.— The well-known uses antiseptically of this acid for surgical purposes, although prohibited from being used for preserving wines in France, have rendered it serviceable in preserving the official solution of hydrochlorate of cocaine, which contains 1½ per mille of the acid, with 10 per cent. of the cocaine salt. I find that this solution, even if diluted with four times its volume of water, still keeps free from fungoid growths. The use of this acid might be objected to in the solution, because salicylic acid forms with cocaine an indefinite compound rather than a salt, the so-called salicylate of cocaine; but it does not appear to throw the hydrochloric acid out of combination, and has proved very serviceable in preserving the solution of this cocaine salt, which has a great tendency to develop fungoid growths. The salicylic compound appears to be allied to the benzoic compound, benzoyl-ecgonine. It forms a pasty mass which has not, that I am aware of, been studied. If any defence were needed for using a preservative, perhaps this official solution of cocaine is a typical case. The use of this solution of salicylate acid 1½ per mille, which is nearly saturated, as a vehicle, might be extended to other solutions—for example, the official solution of sulphate of atropine—but I have not found this solution, if made with a well crystallized salt, prone to grow fungi. Its use, however, cannot be extended to the hypodermic injection of morphine; if a solution of tartrate of morphine 1 in 12, or even 1 in 20, be prepared in it, a crystallized salicylate of morphine separates; 16½ tartrate keeps well alone.

Of the salts of morphine suitable for hypodermic injection, the tartrate seems to be now favored; the acetate solution, prepared by dissolving pure morphine in just enough acetic acid, has

till lately been mostly used, but it has the objection of possessing a tendency to decomposition and becoming muddy and dark-colored. Still I have two solutions here over eighteen years old, and no extra sterilizing precautions were taken when made: they are well preserved and are perfectly transparent, although they have slightly changed color. One is of the strength of one grain in six minims, which I advocated in a paper in 1870, the other is one grain in twelve minims. A small dose is generally preferred for hypodermic injection, but the strength of one grain in six minims is considered now to be dangerously strong in the hands of an unskilled operator. The more nearly saturated, however, the aqueous solution of any salt or crystalline principle is, the better it will keep; in fact, it was a curious argument of an advocate for spontaneous generation that there was a debatable land between that of crystallization and the germination of organisms in these solutions—that is, between the growth of crystals and of organisms; this applies widely in pharmacy, as we well know, in keeping syrups, for example. A nearly perfect syrup consists of two parts of sugar and one of distilled water; kept at a uniform temperate heat, this neither crystallizes nor grows fungi; and our solid medicinal extracts are preserved if they contain no excess of moisture.

Further, these remarks especially apply to the official solutions of acetate and citrate of ammonium, which are much better kept in a concentrated form.

The salicylic acid solution cannot either be used for preparing the hypodermic injection of apomorphine; a one-per-cent. solution of the hydrochlorate of apomorphine prepared in it gives a quantity of a crystalline deposit.

Hydrochlorate of apomorphine in aqueous solution rapidly develops a green color; this has been attributed to the influence of ammonia in the atmosphere, but although a drop of solution of ammonia does develop the green color immediately, it is apparently not due to this alone. This salt is now prepared much purer than formerly, and it is also not so soluble. The official strength of the hypodermic injection, 1 grain in 50 minims, *i.e.*, 1 in 45.5 parts, of camphor-water is not held in solution at 60° F. Dott gives the solubility in water as 1 in 50.89, Squire as 1 in 56 to 60. I find 1 part in 60 of boiled and cooled distilled water dissolves, but turns green within a few hours; if acidulated with a trace of hydrochloric acid, say, an equal weight of the official diluted hydrochloric acid, the color is preserved, but it is rendered less soluble. More than a one-per-cent. solution, if acidulated, is not certain to keep free from crystals at the variable temperature to which it may be exposed, and less than the quantity of acid I have named does not keep it free from color.

Mercuric Chloride.—A simple solution in distilled water or even in spring waters containing supercarbonate of lime in solution, is more stable than it is with a preservative added, especially one of such a nature as chloride of ammonium in the official solution. This, as I showed so long ago as 1870, instead of being a preserva-

tive, forms a double salt in solution (sal alembroth *plus* an excess of chloride of ammonium), and the solution, if prepared with common water in place of distilled water, or even if prepared with distilled water and diluted, throws down a quantity of one of the white precipitates of mercury. To such an extent is this the case that I found in preparing a pint of the official solution with New River in place of distilled water, that 2.7 grains of this precipitate was deposited, thus about one-fourth of the mercurial salt was rendered insoluble in preparing the solution, and more deposited on further dilution with the water. In fact, a time arrived when there was scarcely a trace of mercury salt in solution, and as this preparation is most largely used in hospitals where common water is always used to dilute the medicines, it leads to very discrepant results therapeutically. It has also been suggested that chloride of sodium should replace chloride of ammonium in the official solution, as this salt is largely used in making the sublimate tablets for the convenience of surgeon's use, but I have found that although sodium chloride helps these tablets to disintegrate readily it has no advantage—in fact it is detrimental to the keeping properties of the solution. I have here two specimens prepared in November, 1895, with water from the Brighton constant supply, which is a very calcareous water; one is a simple solution of the perchloride, and the other has an equal weight of pure chloride of sodium added. The latter has deposited much more than the former, in which there is hardly a trace of deposit. This strongly illustrates the undesirability of tampering with solutions in order to make them, as we consider, more stable; in fact, with few exceptions no preservative should be added to a pharmacopeial preparation unless the label indicates boldly that it is there.

While on the subject of mercuric salts, I should like to illustrate the importance of having our lime-water of full strength, and well preserved. In making the yellow mercurial lotion of the B.P., which has eighteen grains of sublimate to ten ounces of "lime-water," if the lime-water be only three-fourths, or from keeping so low as one-half, the pharmacopeial strength, a brick-red preparation—an oxychloride—is produced, rather than the yellow mercuric oxide.

Sugar.—A useful preservative from oxidation of the ferrous preparations, such as the saccharated carbonate of iron, mixture of iron, Blaud's pill and iodide of iron pill, it also preserves lime in solution, as in the well-known calcis saccharate of a strength of about sixteen times that of the official lime-water. If a pure marble lime is used as much as 8.16 grains in a fluid ounce is found.

Boric Acid.—Of the preservatives suggested for keeping apomorphine injection, boric acid has been mentioned, but this I find, in a solution containing 2 per cent. of each—boric acid and hydrochlorate of apomorphine—forms an opaque white jelly, and even with 1 per cent. of each a curious translucent jelly is formed, quite unsuitable for hypodermic injection. Boric acid has been recommended and is used largely for preserving solutions for hypodermic injection, but as a solution of it, 1 in 30 parts of water,

which is nearly saturated, will itself develop some peculiar fungi, I can see little advantage in employing such a preservative pharmaceutically. Mr. Lee has mounted a specimen of a *torula* which has been grown in a saturated solution of boric acid in distilled water.

Chloroform.—The addition of chloroform to vegetable infusions and other aqueous preparations of vegetable and animal substances was recommended by Mr. J. B. Barnes in the proportion of from one-eighth to one-half per cent. by volume. The addition of chloroform as an inhibitory in suspended pharmaceutical operations is of great service, and it has the advantage that by gently warming the solution for a short time it can be easily dissipated, but it has also the disadvantage that the chloroform evaporates too easily for prolonged preservation: yet I have tried the experiment of preserving fruit (damsons) in stoppered bottles, adding about one-three-hundredth part of their weight of chloroform to them. The preservation was complete, but the flavor of the chloroform was not dissipated by even baking the fruit in pies.

Heat and Cold.—These are the most important preservatives we possess, especially as regards our food supplies, commercially keeping in a fresh condition meats and many articles of our daily food.—Wm. Murrell, *Pharmaceutical Journal.* A. J. H.

ULCER OF THE LEG.

Among the numerous modes of treatment which are employed, says a writer in the *Gazette Hebdomadaire de Medicine et de Chirurgie*, two are worthy of consideration, "cauterization with tincture of aloes, recommended by M. V. Dehaine, and Unna's dressing, recommended by M. R. AuBouin."

The advantages to be derived from tincture of aloes, which is suitable in the treatment of deep, rebellious, and anfractuous ulcers with profuse suppuration, are that it hastens the formation of granulations and favors the formation of epidermis, and that, in consequence of its rapidly drying action, it is not necessary to renew the dressing frequently. The only inconvenience is a sharp, although temporary, pain caused by the application of the tincture. The treatment is contraindicated in very extensive circular ulcers, which are amenable only to surgical intervention. The mode of treatment is as follows:

1. Careful cleansing of the ulcerated surface with an antiseptic lotion.

2. Drying the ulcer with absorbent cotton.

3. Painting it with the tincture of aloes according to the following directions: If the ulcer is superficial, it is sufficient to pass the brush once over the affected spot; if it is deep, a second layer may be applied after the first has dried. These applications must be allowed to dry completely, so that the second dressing will not adhere to or detach the crust formed by the first.

4. Over the painted surface a piece of impermeable linen is placed, which insures contact with the alcoholic preparation and prevents the dressing from adhering to the crust.

5. The leg is wrapped entirely in aseptic gauze and cotton.

Very frequently, however, aside from the ulcer itself, the skin of the varicose limb is diseased: it easily becomes excoriated by the liquids secreted by the ulcer, it is eczematous, and it presents various troubles of nutrition. It is in these conditions that, apart from topical applications, such as aloes, Unna's dressing is indicated. In this way the skin is treated at the same time as the ulcer, and after cicatrization is obtained ulceration of the neighboring parts, which is usually seen with other modes of treatment, is rarely observed. The procedure is as follows:

After prolonged cleansing of the ulcer with hot water and soap, brushing with a rough piece of linen which has been rendered aseptic, and disinfection with an antiseptic liquid, the entire region invaded by the varicose eczema is covered with a thick layer of Lassar's paste, of which the following is the formula:

℞ Starch,
Zinc oxide..... āā gr. 300.
Vaseline ..... gr. 600.
M.

The ulcer is dusted with iodoform, aristol, or dermatol and then covered with a layer of cotton. The entire leg is then painted with Unna's paste, which is melted and applied with a brush. The parts that are covered with Lassar's paste must also be coated with a layer of Unna's paste, which is composed of the following:

℞ Aq.,
Glycerine..... āā ʒ 2.5.
Gelatin,
Zinc oxide..... āā gr. 300.
M.

The leg is then bandaged with tarlatan which has been starched and soaked in hot water, and the bandage is drawn somewhat tight in order to make a moderate compression. Over this a dry linen bandage is placed. At the end of from two to six days the secretion will pass through the dressing, which is then changed. A hot bath is sufficient to soften Unna's paste, after which a second dressing is applied.

Under the influence of this treatment the secretion dries up and the bandages are renewed only once in two weeks; the appearance of pus is the only indication for the renewal of the dressing.

When surgical treatment cannot be employed, the tincture of aloes is preferable as a topical application, especially in deep ulcers of medium size. At the same time, if the skin is eczematous, Unna's dressing is indicated, for it is a valuable adjuvant to the employment of topical agents of any kind, and it has the advantage of preventing a recurrence of the affection—*N. Y. Med. Jour.*

Pathology.

IN CHARGE OF . . .
W. H. PEPLER, M.D.

THE PATHOLOGY OF GAS POISONING ILLUSTRATED BY FIVE RECENT CASES.

BY J. LORRAIN SMITH, M.A., M.D.,
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THE following cases of poisoning by lighting gas occurred in Belfast in October, 1898, and January, 1899. I was asked by the coroner to examine the bodies, and in each case an exact determination was made of the percentage to which the hemoglobin of the blood was saturated with carbolic oxide, the details of which are here recorded. As far as I am aware, no similar determinations have hitherto been made in cases of gas poisoning.

The lighting gas supplied in Belfast is a mixture of coal gas with about 40 per cent. of carburetted water gas. This mixture contains about 16 per cent. of carbonic oxide, whereas the coal gas contains only about 6 per cent. Water gas is now being extensively used in this country, and the serious extent to which its admixture with coal gas increases the risk to the public has just been reported on by a Home Office Department Committee.

On October 4th, 1898, S. H., a young woman, went to bed at 8.30 p.m., and was found dead at 6 next morning. The room occupied was of about 330 cubit feet capacity. It had no chimney. The ventilation by door and window was relatively small, as they were close fitting. The gas was found turned half on when the deceased was discovered.

Post-mortem Appearances.—A large amount of froth was observed about the mouth and nose. The lips were pink in tint. There was a distinct pink color in the skin of the dependent parts. The left hand was extended; the right hand was flexed. *Post-mortem* rigidity was well marked.

Internal Appearances.—No pleuritic or pericardial fluid. Right heart collapsed; left heart moderately rigid. The cavities of the heart were nearly empty of blood. A few drops of blood were allowed to fall into a vessel of water, and at once showed the characteristic pink tint of carboxyhemoglobin. The lungs were slightly congested, but there was no edema. The larynx and trachea were congested, and had a very pink appearance on the mucous surface. Some frothy mucus was in the bronchi. Emphysema very slight. The stomach contained half-digested food

The intestines had a diffused scarlet tint. The kidneys and liver were congested, but otherwise normal. The meninges of the brain were markedly congested. There was complete absence of any lesion to which death could be ascribed except the saturation of the blood with carbonic oxide.

Samples of the blood were taken in sealed tubes, and examined by the carmine method as soon as I had reached the laboratory. It was found to be 83 per cent. saturated with carbonic oxide. The conclusion was, therefore, perfectly clear that the patient had died from poisoning with carbonic oxide.

On January 4th, 1899, two fatal cases of gas poisoning occurred. A maidservant and two children had gone to bed in an attic room about 11 o'clock at night, and were discovered next morning shortly before 10 o'clock. The cubic capacity of the room was about 1,000 feet. There was a window, but no fireplace in the room. The floor and walls were imperfect in construction, and ventilation was probably fairly good. One child was discovered alive, and Dr. McHarry, by artificial respiration and other means, succeeded in restoring it. The other child and the maidservant were dead.

Post-mortem Examination of M. A. (Maidservant).—The lips and conjunctiva were pale. There was froth at the mouth and nose. There was a bluish-pink lividity on the dependent surfaces. *Post-mortem* rigidity was well marked. The body was scarcely cold twenty-four hours after its discovery. The muscles were red on incision. About eight ounces of pink serous fluid was found in the left pleural cavity, and about six ounces in the right. About two ounces of a similar fluid was found in the pericardial sac. The lungs were pink in color, and in both there was subpleural emphysema. There was a large amount of frothy mucus in the bronchi. The larynx and trachea were injected, and pink in color. There was no edema or congestion of the lungs. The stomach and intestines were pale pink in color. The stomach contained fluid food, and its internal surface was pale. The esophagus and spleen were blue. The liver and kidneys were redder than normal on their cut surface. The meninges of the brain were congested and bluish-red in color, but otherwise normal. The brain substance was normal.

Samples of the blood were taken from the right auricle, and on examination by the carmine method were found to be 76.6 per cent. saturated with carbonic oxide.

Post-mortem Examination of M. C., aged 4 years.—The appearances were similar to those of the case just described. There were some punctiform hemorrhages on the surfaces of both lungs, but no subpleural emphysema. There was, however, some vesicular emphysema in both lungs; otherwise the two cases were practically identical in their appearances.

The blood was examined by the carmine method, and was found in this case to be 69.5 per cent. saturated with carbonic oxide.

The conclusion was, therefore, that in these two cases also death was due to carbon monoxide poisoning.

A point of interest in connection with these cases was that a young man who slept in an apartment, separated by lath and plaster wall alone from that in which the escape of gas had occurred, also suffered from the effects of the gas. He was able to move about when he was discovered, and walked without assistance into the ambulance, which conveyed him to the Royal Hospital. Twenty-four hours later he had not completely recovered, and had no recollection of the occurrence, or of being brought to the hospital. It is probable, however, that the exertion he was allowed to make had considerable effect in aggravating his condition.

On January 10th two cases of gas poisoning occurred. One of these was a woman aged 72, who had retired to bed about 11 p.m., and was found dead at 8.45 next morning. The other was a young child sleeping in the same room, who was breathing when discovered, and was still alive when Dr. Tomb arrived. I am indebted to him for the following notes of the clinical condition of the case, and of the treatment he administered: "The child, when I arrived, was lying motionless and unconscious. The breathing was labored, and there was froth exuding from the mouth. It had a cyanotic appearance, and the pulse was quick and thready. It was to all appearances in a dying condition. I wrapped the child in blankets, allowed free access of air to the room, and applied artificial respiration by Sylvester's method. I found a difficulty in this, because, when the arms were extended, the muscles were thrown into a rigid condition from spasm. I administered coffee *per rectum*, and injected ether hypodermically, as the heart seemed to be in a weak, paralyzed condition. The child remained motionless, but could be made to cry out when flapped with a wet towel. About three hours after I first saw it there occurred a fit of vomiting, when it died. There had been no sign of improvement during this time." I was requested by the coroner to obtain for analysis samples of blood from the bodies. There was no further *post-mortem* examination.

The blood, when examined, showed in the case of the woman the distinct pink color of carboxyhemoglobin. It was found, by the carmine method to be 57 per cent. saturated. The blood of the child, on the other hand, showed merely a recognizable trace of the pink color, and was not more than 5 per cent. saturated. As she had been exposed to at least as poisonous an atmosphere as the woman, there is no doubt her blood must have had at one time approximately the same saturation. The carbonic oxide had, however, disappeared from the blood, presumably from the artificial respiration applied by Dr. Tomb.

The saturation in the cases was, therefore, as follows: No. 1, 83 per cent.; No. 2, 76.6 per cent.; No. 3. 69.5 per cent.; No. 4, 57 per cent.; No. 5, 5 per cent.

This series of cases affords an opportunity for raising some

important questions in regard to the pathology and treatment of poisoning by coal gas. As is generally believed, and as was proved experimentally in an investigation which I recently carried out at the request of the Water Gas Committee,[1] the poisonous effect of gas is due to the carbonic oxide, and not to the other ingredients present, although there is no doubt that other poisonous bodies are present. The chief of these is probably benzene vapor; the quantity of this, however, which would be present in the atmosphere from accidental leakage would be harmless. Carbonic oxide is poisonous because of its affinity for hemoglobin, taking the place which oxygen occupies in the normal process of aëration of the blood. This affinity of carbonic oxide for hemoglobin is almost exactly 300 times as great as that of oxygen. A sample of blood in a flask exposed to air containing 0.07 per cent. carbonic oxide, and shaken well up so as to absorb the gases until the hemoglobin is completely saturated, will, when examined, be found 50 per cent. saturated with oxygen and 50 per cent. saturated with carbonic oxide. Similarly, if we breathe air containing 0.06 to 0.07 per cent. carbonic oxide, the hemoglobin becomes equally saturated with oxygen and carbonic oxide. Speaking generally, the larger the percentage of carbonic oxide present in the air the higher the resulting saturation with this gas. The limit for the circulating blood is reached when its hemoglobin is so highly saturated with carbonic oxide as to be unable to carry sufficient oxygen to support life. The first case in the series had reached the highest limit which has been observed (83 per cent.). The patient in this case had survived until only 17 per cent. of the total oxygen-carrying power of the hemoglobin was left unoccupied by the carbonic oxide. The other percentage in the cases is distinctly lower. The same variation in saturation, however, is observed in the blood of coal miners who have died from the carbonic oxide resulting from an explosion in the pit.[2]

Since the most important point in such cases is the saturation of the hemoglobin by the carbonic oxide, it may be well to refer to the method by which it is estimated. The carmine method was first described by Haldane.[3] The color of a dilute solution of blood in the normal condition is yellow, but if carbonic oxide be combined with the hemoglobin it is pink. The intensity of the pink color in a given sample depends on the relative proportions of carboxyhemoglobin and oxyhemoglobin present. It is possible by adding a dilute solution of carmine to normal blood to give it the pink color of the blood containing carbonic oxide, and if the carmine solution be added from a burette we can measure the amount needed to give a pink of the same intensity as that due to any given saturation with carbonic oxide.

As regards the pathology of the condition, two facts of importance must be kept in view. The first is the effect of the saturation of the hemoglobin with carbonic oxide is equivalent to that of depriving a person of oxygen by decreasing the amount in the air

breathed. The patient poisoned by gas actually suffers from a form of suffocation. When a person exposed to carbonic oxide is found while still breathing and placed in normal air the carbonic oxide is gradually eliminated from the blood, so that after some hours it has completely disappeared. The eliminating force is the affinity of the oxygen for the hemoglobin. This gradually displaces the carbonic oxide, and the higher the percentage of oxygen the quicker the elimination. The case of the child No. 5 is of importance because it is the first on record in which it was proved that in three hours practically the whole of the carbonic oxide had been eliminated from the blood. In any case, when urgent symptoms of suffocation are present, pure oxygen should be administered, or if this cannot be procured, artificial respiration should be performed. It is desirable that the patient should remain as short a time as possible under the influence of the carbonic oxide, and for this reason oxygen should be administered even when the sole advantage would be a hastening of the recovery.

To the second fact—the after-effect on the patient of being nearly suffocated—I wish to call special attention, since it forms the real problem with which a physician has to deal. The more important elements of the after-effect are as follows:

1. A most important effect which the deprivation of oxygen has on animals is a fall in the body temperature. This is especially true of very small animals, such as mice; it is also true of man. The patient, if cold, should be warmed as rapidly as possible by the ordinary means, applied externally and internally. It has been noted by Haldane that after an explosion in a coal mine the men are often observed to become unconscious or even to die suddenly when they reach the outside air. The comparative coldness of the fresh air is in all probability an important factor in producing this sudden effect. Again, cases are recorded in which the temperature has risen before death, suggesting that the nerve tissues concerned in regulating the body heat have been seriously damaged by the deprivation of oxygen. In this condition of the nervous system the effect of cold air may be greatly exaggerated.

2. When the blood is over 30 per cent. saturated with carbonic oxide even slight muscular exercise such as walking produces violent headache, and if the saturation be a little higher the exercise, unless extremely moderate, causes the person to become giddy and unable to proceed. In the record of the cases Nos. 2 and 3 I mentioned that a young man in the next room had suffered from the effects of the gas, but that at first he was able to walk about and yet did not recover for over twenty-four hours. The probability is that he aggravated his condition by the exertions he made. When the blood is highly saturated with carbonic oxide treatment should include complete rest. Any exertion causes a drain on the available oxygen, and when this is much reduced the smallest additional drain is probably very serious. A most valuable account of the effects of exertion on those poisoned by carbonic

oxide will be found in the Blue Book on the Snaefell Mining Disaster. An abstract of this report was given in the *British Medical Journal* of July 2nd, 1898.

3. An increased excitability of the nervous system is seen in the convulsions or tetanic spasms which occur. Effects of this nature have been obtained by the partial suffocation of animals, and it is not infrequently the case that patients die from damage to the nervous system hours, or it may be days, after they have been removed from the gas. On this question interesting notes will be found in Dr. Shaw Lyttle's Appendix to Haldane's Report on Colliery Explosions, 1896.

4. The heart is frequently affected. Dr. Tomb remarks that the great source of difficulty in the case he treated (No. 5) was the condition of the heart.

5. More remote effects still have to be noted. Dr. J. R. Davison, of Belfast, described a case of gas poisoning in which the patient died after four days from pneumonia. This patient never completely recovered consciousness. Part of the general damage which the suffocation had caused was a lowering of the normal resistance to the pneumococcus.[4]

The fact on which all the symptoms depend is the deprivation of oxygen. The mechanism of the circulation and various nerve centres are affected because they continue in activity, during the period of suffocation, at approximately the normal rate, while the available oxygen has been reduced to a minimum. This doubtless causes in the living tissues profound pathological changes. The nature of these changes is unknown apart from their functional manifestations.—*Brit. Med. Journal.* W. H. P.

References.—1. Report of the Committee, 1899, Appendix 7. 2. *Vide* Haldane's Report on the Causes of Death in Colliery Explosions, 1896. 3. *Journal of Physiology*, vol. xviii, p. 430. 4. Report of Carlisle meeting of British Medical Association, 1896.

Constipation, Habitual.—In cases of obstinate chronic constipation the systematic administration of enemata of water retained until completely absorbed is a method of treatment often attended by very satisfactory results. At the commencement a lavement of eight ounces of tepid water is given at bed-time, or, if one has to deal with a patient who is intolerant and sensitive, a weak infusion of camomile is given instead. The disagreeable sensation provoked by the presence of water in the rectum rapidly subsides and does not prevent the patient from sleeping. The administration is repeated every evening, the quantity of liquid being gradually increased to twenty-four ounces and its temperature lowered to 68° F. The patient should go to stool in the morning, and, if the attempt at defecation be unsuccessful, an ordinary enema should be given. The duration of this treatment varies from a month to six weeks. At the end of this time spontaneous defecation is generally established.—Klemperer, *La Sem. Méd.*, January 4th, 1899.

REPORT OF DEATHS FROM CONTAGIOUS DISEASES IN ONTARIO FOR THE MONTHS OF FEBRUARY AND MARCH, 1899.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

FEBRUARY, 1899.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Rate per 1000 per annum from all causes.	Scarlatina.	Rate per 1,000 per Annum.	Diphtheria.	Rate per 1,000 per Annum.	Measles.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum.
2,237,882	725	2,568	13.7	32	0.1	35	0.2	2	0.01	3	0.01	16	0.08	215	1.1
98%	93%														

MARCH, 1899.

2,271,750	730	2,361	12.1	36	0.2	25	0.1	2	0.01	9	0.05	17	0.09	235	1.2
99%	94%														

Population of Province 2,283,182

Registration Divisions of Province..... 777

The Canadian Journal of Medicine and Surgery

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Editorials.

PUBLICITY OF THE DEATH PENALTY.

WE learn that Mr. Ethier, M.P. for Two Mountains, who defended Samuel Parslow and Madame Poirier, the homicides, will introduce a bill to so amend Article 941 of the Criminal Code as to add that the sheriff shall have no power to admit to witness executions persons other than those whose presence is by law permitted.

Article 940 of the Criminal Code of 1892 provides that "The Sheriff charged with the execution, and the gaoler, and medical

officer, or surgeon of the prison, and such persons as the sheriff requires should be present at the execution."

Article 941 states that "Any justice of the peace for the district, county or place to which the prison belongs, and such relatives of the prisoner *or other persons* as it seems to the sheriff proper to admit within the prison for the purpose, and any minister of religion, who desires to attend, may also be present at the execution."

In Canada, so far, no serious effort seems to have been made to exclude the public from the legal but disagreeable performance of an execution. On the contrary, these lugubrious functions take place in the full light of day, and in the presence of enormous crowds of people. The little procession leaves the prison, arrives at the scaffold, the hangman performs his office, and the spectators, animated by an unworthy but perfectly human curiosity, struggle desperately and even injure each other in their efforts to secure some coigne of vantage from which the sad drama may be witnessed, with more convenience to themselves. The reporters, pad and pencil in hand, take rapid notes of what transpires. Special editions of the newspapers will be published to meet the eyes of indifferent, interested, or even enthusiastic readers. A phrase, that does not make the pulse of one man beat more frequently than is usual, fires the heart of another with enthusiasm. In describing an execution the reporter will give prominence to "the colossal nerve," "unprecedented coolness," and other dauntless characteristics exhibited by the prisoner. Such stereotyped phrases strike no sympathetic chord in the breast of the normal man, but fellow reprobates, who knew the condemned man and emulated his actions during his lifetime, now that he is dead admire him as a hero and an example to tyros in crime. All this publicity and effort to make known to others the details of what should be shocking and repugnant, do not indicate that Canadians are cruel and fond of exhibitions of sanguinary violence. Until the law limits the attendance at an execution, the people will flock to witness it, as well as any other unusual or striking spectacle. Even if people were given to feel admiration for such degenerate sports as cock-fighting, dog-fighting, and prize-fighting, the law would prevent their enjoyment, or punish it with a heavy fine. And why should the criminal law punish a spectator for witnessing a cock-fight, and yet encourage him to obtain through the intervention of a sheriff, the opportunity of witnessing the dying struggle of a fellow-creature,

who, with his hands tied behind his back, is permitted to dangle from the end of a rope? "Quite illogical," some one will say, for society must protect itself against rampant crime, and there is nothing more efficacious than the fear of death to frighten sinners. An execution and its forceful portrayal in the newspapers may stay the downward steps of men and women who are dallying with crime, but have not yet developed into murderous criminals. We do not say that the law regulating executions in Canada should be repealed and penal servitude, combined with education, adopted instead of hanging. We think that when privacy in the conduct of executions shall have shown that the people are becoming ashamed of a judicial homicide, it will then be opportune to advocate better methods for repressing the evolution of crime. In Germany, executions are conducted in a comparatively private manner. Article 486 of the German criminal procedure states, "Every execution shall take place in a locality, surrounded by walls. The persons who shall assist at the execution are: two police magistrates, an imperial procurator, a registrar, the gaoler, and twelve inhabitants of the municipality designated by the Council, as well as the prisoner's lawyer, and an ecclesiastic of the religion to which he belongs." It must be confessed, however, that in addition to the twelve citizens of the town in which the execution takes place, representatives of the press, and this is a grave error on the part of the German legislators, are also permitted to be present.

Recently at an execution which took place at Strasburg, in Germany, the reporters were excluded by a neat piece of *finesse* on the part of the local bar. To the official bill, placarded on the court house, announcing the time and place of the execution, the following notice was added: "In view of the smallness of the place the bar believes that it is its duty not to authorize the representatives of the press to assist at the execution." Generally speaking, the guillotine is erected in the largest yard of a prison, but in this instance the smallest yard was chosen by the bar precisely to secure the absence of the reporters, and thus save the public from some dithyrambic effusions on the possible nerve, courage and coolness of the condemned prisoner.

We hope that Mr. Ethier's amendment to the Canadian criminal procedure in the matter of executions will be adopted, and that the powers of the sheriff to admit reporters or "other persons" than those who are legally entitled to be present, will be withdrawn.

J. J. C.

GANGRENE AND PHAGEDENA IN VENEREAL SORES.

Mercury is said to be one of the principal adjuvant causes in the production of that destructive gangrene of the genitals, which sometimes attacks a chancre in these parts. The bacteriology of this formidable affection, in which the loss of the penis occurs in a few days, remains unknown. It is reasonable to think, however, that the pyogenic bacteria, the staphylococcus, streptococcus and proteus vulgaris will not act on the tissues of man in a destructive way, unless the parts into which they are introduced are deeply injured, bruised or devitalized. If the organism is vigorous, reaction ensues and is exhibited under the form of suppuration; if, on the contrary, it is incapable of reaction necrobiosis and gangrene are developed. In what way mercury can contribute to the development of gangrene is purely a matter of conjecture, and yet, in groping for a cause, medical writers do not hesitate to incriminate this friend of mankind and sheet-anchor of the physician. Thus, in 1898, a writer in the *British Medical Journal* contended, that the sloughing and phagedena, observable in the genitals of the British soldiers treated at Netley Hospital, were due principally to the active use of mercury. He alluded to the historic gangrene known as "the black lion," which attacked the genitals of British soldiers in Portugal, during the early years of this century, and stated that that lesion was also due to mercury. No evidence, either clinical or experimental, was adduced, except a graphic description of chronic mercurialization. Such a statement merely helps to prejudice the practitioner's mind against the use of mercury in syphilis.

Bryant ("Practice of Surgery," p. 463) says: "Sloughing and phagedenic sores are rarely seen except in connection with syphilis or hospital gangrene. In syphilis, sloughing is found in the intemperate and ill-fed and mostly in gin-drinking prostitutes. It attacks any surface that has been made sore, either from venereal contact or other cause. It is marked by the rapid way in which the process destroys tissues, the fetid character of the discharges, the great depression of power invariably present, and the constitutional disturbance."

That phagedena is caused by mercury is denied by Dr. Jullien, a recognized authority on venereology, who gave to the Medical Society of Paris (April 8th, 1899) a report of three cases, in each

of which phagedena attacked a chancre, and in all three a history of paludism was made out. Dr. Jullien does not accept the old-time view that a sloughing venereal sore is probably a chancroid. He says: "Confronted with phagedenic chancre, the practitioner should think of syphilis and look out for paludism. In the matter of treatment, he should remember the benefit of absolute rest in bed, which calms the painful insomnia, the most distressing symptom of this condition, and, if there is an opportunity, should use calomel freely." Dr. Jullien also extols the advantages of hydrogen peroxide as a lotion for phagedenic ulcers.

His defence of mercury in the treatment of syphilis, and his novel incrimination of paludism as the efficient cause of phagedena, are timely. He had the courage of his convictions to use mercury *larga manu*, when he was in the presence of a redoubtable complication.

As paludism is prevalent in some parts of the United States and Canada, it would be interesting to learn from American and Canadian practitioners, if in their experience it has been found associated with phagedena. J. J. C.

WHY DON'T CLERGYMEN PAY DOCTORS?

The question raised in our caption, though it has never been considered of enough importance to occupy the minds of philosophers by profession, is by no means as simple as it seems on the surface; for the usage is not wholly based on self-interest, nor wholly on charity, while it has a certain smack of both and a strong suggestion of neither. Usages which partake of this nature may be called complex.

In the rural districts of this province, where the average stipendium enjoyed by the minister of the Gospel falls somewhat short of a dollar a day, the eleemosynary sentiment is very general; and while the farmer makes votive offerings of cabbages, and the storekeeper of baking powder, it is only reasonable that the physician, not to be outdone by these, should pour out libations of black draught in the same spirit.

But it is not of the country preacher that we ask this question, but of the city representative of the Cloth, who receives as many thousands as his rural brother does hundreds, and, what with free rent and tax exemption, lecture and other fees, may be said to be

fairly comfortable in a worldly way. Why should not *he* pay his physician, as the modest and retiring life insurance agent cheerfully does? As the school inspector, the alderman, the merchant, the music teacher and the cabinet minister do? The clergyman does not know. The physician himself does not know, but would like to.

In an unobtrusive, amateurish way, we will attempt to answer this question, premising in the first place that it is the physician's fault and the clergyman's weakness. Under the guise of respect for the Cloth, or charity if you will, the physician, in the remission of his fee, is nevertheless tacitly acknowledging a counter account of generally far greater amount than the fee in question. For what were the last words of his mentor as he started practice? "Never neglect the Church, my friend—in Ontario it is the hall-mark of respectability! Take an active part. Be as officious as you can be. Pose as a person of 'Moral Fibre.' Take as your maxim in life those moving lines from 'Hymns, Mournful and Mediæval':

"'Crime, Wickedness, Villainy, Vice
And Sin, only misery bring;
If you want to be happy and nice,
Be good—and that sort of thing;'

meanwhile assiduously cultivating the tender beginnings of a practice." To follow these precepts it was necessary for the physician to "stand in" with the parson. If he had a wife, therefore, he placed her in the choir. If he hadn't one he straightway married a member of the Ladies' Aid. In return it was a very natural part of the Sacred Function to "boom" so exemplary a member of the medical profession. And in return for a favor so marked it was only natural that the physician (in his purer moments) should give his professional services gratuitously when they were called into requisition by the shepherd, though (in his sordid moments) he might feel that it was an excellent advertisement for the flock, and one for which others, if he held back, would willingly pay upon the same terms.

But not only do clergyman and physician frequently become colleagues from the very nature of this social relationship, but there is a striking analogy between their callings, though apparently so diverse, which must necessarily inspire mutual sympathy. A considerable part of the dealings of both is with hypochondriacs. And the mental flaw in these melancholy worthies is quite

identical, whether the patient be anxious about the care of his kidneys or the salvation of his soul; though in one case he persecutes his physician privately with his tireless fear, and in the other throws himself publicly at the feet of the evangelist with loud bellowings of terror. The difference is merely a clinical one, though in the matter of remuneration the physician has somewhat the advantage.

That such a usage speaks little for the dignity of either profession goes without the saying; and it is to be hoped that the present tendency towards independence upon both sides will become more and more pronounced. Certainly the paltry motives of self-interest, which operate in the conditions mentioned, apply to only a certain class of professional men. Physicians with any respect for themselves will not willingly barter a denominational allegiance for an advantage so cheap as that which is offered in return. In the practice of every physician there must always be much that is gratuitous, but let the physician decide such cases himself, for personal, and not for professional reasons. E. H. S.

THE CHARITY AID ACT.

According to the report of the Inspector of Prisons and Public Charities, Ontario divides annually *pro rata* $110,000 among its hospitals—some fifty in number. One could wish that this money could be expended as originally intended, in charity to the poor; but many means have been devised to divert it into other channels. In Toronto there is no charity hospital: every patient must be paid for in some way, by friends, municipality, or Government aid. The nearest approach to such a charity hospital is one where free treatment is the right claimed, not for the poor, but for a privileged class, the members of the Masonic Order.

In this province it is the custom to charge hospital patients $2.80 per week. Whether that sum bears some magic relation to the actual cost of maintenance, or whether its virtue is that it divides evenly by seven, we have long been unable to decide. A perusal of the Charity Aid Act throws light upon the subject. The Act provides that no institution shall receive aid for pay patients, and defines such patients as "one who pays or for whom is paid to such institution from any source other than the public funds of the province, a weekly sum of not less than $3.00."

Any patient who pays $2.80 per week is able to pay $3.00; many of them are well able to pay $4.00 or more. But the hospital trustee, who desires to gain renown among the public, or it may be to secure a pull on some fraternal order, says, "No, my poor friend—my heart is wrung for you—you shall pay but $2.80 per week, not $3.00." His philanthropic vest heaves with the pride of a good deed, and of having made $1.80 by "doing" the Province out of $2.00 per week for each such patient.

In the Victoria Hospital for Sick Children free treatment is given to the children of Masons, although some of them are well able to pay for private ward accommodation as well as medical attendance. Why this invidious distinction in favor of the Masonic Order is made we are unable to say; that, too, in a hospital which owes so much to the contributions of the general public for the support of the poor. Wealthy Masons have—to their shame be it said!—been too ready to debase a charity. Masons who would scorn to regard themselves as unable to pay a hospital, or to become a charge upon the public funds, have drawn pay from the Government and the city for the maintenance of their children as free public ward patients, in the name of charity, and to the glory of the Masonic Order. The trustees of this hospital seem to have gone out in search of patients, and have compelled them to come in, for we are loath to believe that any self-respecting Mason would put himself or his child in the position of being supported by the public funds. Already one member of the staff of this hospital has resigned, and, owing to the above condition of affairs, we hope that his example will be followed by other members of the staff.

How long will the Province of Ontario permit the public funds to be diverted by a public institution, under provincial inspection, for the advantage of any privileged class? Let not only this but all the other abuses of the Charity Aid Act be corrected. The sooner the better. W. A. Y.

TO PUT CHRISTIAN SCIENCE TO THE PROOF.

To cure the ills that flesh is heir to, to preside at an accouchement and usher the little stranger into this vale of tears with a solemn "imposition of hands," is one of the offices of a prominent member of the Christian Science cult in this city. He is said to get $5 for the imposition of hands at an obstetric case. Another man boasts

that, in addition to his salary as a dry-goods salesman, he makes $1,000 a year as a Christian Science healer: and the best of it is that he has "heaps of fun" in the doing of it, for, with true Celtic versatility, he can perform his medico-religious part with an unction which even Hamlet could not cavil at, while when among his fellow-salesmen he dilates upon the superstitious silliness of his dupes, whose religious imaginings fill him with inextinguishable laughter. Truly a strange revelation of successful charlatanry and besotted human weakness!

And while the healer is selling his soul for a few dollars, the dupes are loudly proclaiming the fact that they have turned their backs on modern scientific discovery. They care not for vaccination, isolation or disinfection; faith and prayer are their helmet and shield. Fortunately for them, though it has not been called into existence through any agency of theirs, State Medicine is powerfully operative in Canada to prevent and control epidemic disease. With increasing intelligence and a less narrow view of the medical situation, the Christian Scientists will probably imitate the homeopaths and call in the aid of hygienic measures, although it is likely that any advance in this respect will be credited by them to the Mosaic sanitary code instead of the regulations of the Provincial Health Board. In the meantime the struggle goes on. As an evidence of good faith, the healers operating in American cities have offered to establish hospitals or sanitariums at their own expense, and let unprejudiced investigators compare their results with those obtained through the use of drugs. With certain branches of surgery they do not intend to meddle, but they propose to use prayers and laying on of hands wherever regular physicians use drugs, and let outsiders record the comparative efficiency of the two systems.

This harping on drugs would make an uneducated person suppose, that the armamentarium of the modern physician consisted simply of pharmaceutical preparations. This would be an error. Some of the best agencies used in the cure of disease, such as massage, hydrotherapy, electricity, and many others, are not drugs. The Christian Scientist reasons from his own narrow past, and because he has gone ten times to the pharmacist, when he has consulted the physician but once, and because he has reaped failure from patent medicines, he claims the right to sit in judgment on modern medicine.

By all means let this bold challenge be accepted! If the Chris-

tian Science healers and their backers in Toronto will start a hospital in which they will demonstrate their powers, the experiment will be carefully watched by the public and the medical profession. They may expect a fair field and no favor, and if their results are poor, then by their works we shall know them.

J. J. C.

MEDICAL WOMEN AND TORONTO HOSPITALS.

In January last, a Woman's Number, in which all the original articles were contributed by physicians of the gentler sex, was issued by the *American Journal of Surgery and Gynecology.* The medical woman is now a factor in the community. Of course the United States is pre-eminently the happy hunting-ground for women, as that country affords a wider field perhaps in current literature, and certainly a wider territory for occupation. That the women have availed themselves of the opportunity presented is unquestionable, as in 1898 4,300 women were in active medical practice while in 1870 there were only 527. These estimated numbers comprise physicians of the Allopathic and Homeopathic Schools; also a few classed under the heading of "Eclectic" physicians In England the "Lady Doctor" was regarded for a while with curiosity. When she appeared upon the stage of human action, the monocle was immediately adjusted, and the complete survey usually ended in some such expression as "Awfully clever, and all that sort of thing, you know, but quite impossible, quite, really, don't you know!" Now, the "awfully clever" has won the day, and the woman physician, even in England, has a small but assured following.

In Canada, not a lifetime ago by any means, one woman fought her way inch by inch, side by side, with the men, demonstrating her ability, making it possible for others to follow. Now the profession have recognized and have reason to be proud of their *confrères*, the medical women. True, the women themselves have not forgotten the prejudice against them that so widely obtained in former years, and their attitude towards the *genus homo* of the profession is still one of defence, their motto being ever—"What we have, we'll hold."

To particularize, in Toronto the medical women having already gained a foothold, now ask for a stronghold in the form of a

Woman's Hospital, the attendant staff to be composed of women This they claim is necessary, owing to the physicians who are graduates of the Woman's Medical College having been excluded from participating as members of the active staff of the city hospitals.

The one woman's hospital in the city, St. John's the Divine, is practically a private institution, so at present cannot be expected to meet the demands of the hour. At the Toronto General Hospital is a Woman's Pavilion; surely by an amicable arrangement and a sum of money expended it could be made to fulfil all the requirements, and, no doubt, in the end this solution of the difficulty would be better for both factions than to have a common purpose divided against itself. Possibly in the near future similar privileges might be granted by the other city hospitals. Take *Punch's* advice, Medical Women, and *don't* build another hospital.

Soon Toronto will become a by-word as the city with a hospital for everybody, and everybody in a hospital. We think it is but just that the medical women should have the experience and scope which the freedom of active hospital work would give them, and we hope their project may be advanced, at least in a measure, but rather by an amalgamation with present forces than by a reaching out and leading into pastures new and somewhat green.

W. A. Y.

THE ONTARIO MEDICAL ASSOCIATION.

The meeting of the Association this year on the 13th and 14th of June promises to be one of very exceptional interest. Particular attention has been given to the programme of papers, which includes many timely contributions from well-known members of the Association, and which, taken as a whole, pretty thoroughly covers the ground both of the specialties and of general practice.

To avoid the awkward break in the middle of the second day, caused formerly by the luncheon, a motion was passed at the meeting last year providing for a regular Association dinner on the evening of the first day, and this new arrangement will, it is expected, enable a great deal more work to be got over, and make possible a more deliberate reading and discussion of the papers. There will be the usual reduction of railway rates, and, through the courtesy of the Minister of Education, the place of meeting

will as last year be the Theatre of the Education Department in the Normal School.

SYNOPSIS OF PROGRAMME.

JUNE 13th.—*Morning Session*—(1) Reports, etc.; (2) "A Case of Muscular Dystrophy," by Dr. Ingersoll Olmstead, Hamilton; (3) "Relapse in Typhoid Fever," by Dr. Wilson, Philadelphia; Discussion by Dr. Alexander McPhedran, Dr. J. L. Davison and others.

Afternoon Session—(1) Presidential Address; (2) "Symposium on Tuberculosis Sanitarium Treatment," by Dr. S. V. Bowditch, Sharon Sanitarium, Boston. Discussion—(*a*) "Pathology of Pulmonary Tuberculosis," by Dr. John Caven; (*b*) "Earliest Diagnosis and Selection of Cases for Sanitarium Treatment," by Dr. N. A. Powell; (*c*) "Home Treatment and Prevention," by Dr. T. F. McMahon; (*d*) "Care and Prevention," by Dr. Charles Sheard. General discussion will follow.

Evening Session—Association Dinner.

JUNE 14th.—*Morning Session*—Sections of Medicine and Surgery.

Afternoon Session—Discussion in Surgery. Dr. Christian Feugier, Chicago, will open the discussion with a paper on "Diseases of the Kidney Amenable to Surgical Treatment," followed by Dr. Luke Tesky, Dr. John Wishart (London), Dr. R. B. Nevitt, Dr. Grasett, and others.

Evening Session—Business.

The titles of a large number of papers have been received. Some of these will be presented before the general session, others in the sections. Free discussion of all papers is desired. Any communications may be addressed to H. C. Parsons, Secretary, 97 Bloor Street West, Toronto.

DOMINION REGISTRATION.

IT will be interesting to the readers of this journal to learn that the subject of Dominion Registration is receiving attention from the medical journals throughout the Dominion. On another page will be found an address delivered by Dr. Roddick at a recent meeting of the Medico-Chirurgical Society of Montreal, in which he goes into many of the details of the scheme. It will be instructive, too, to know that at the time of writing the doctor is in British Columbia, where he hopes to lay the matter before a large number of the profession of that province. Upon his return he will discuss it with members of the profession in the North-West and in Manitoba.

The Medical Council of the North-West Territories has already

had the matter before its legislature for the purpose of furthering the scheme of reciprocity. Manitoba is anxious and willing to lend a hand.

From the *Maritime Medical News* just to hand, it appears that the Council of Nova Scotia has sought and obtained additional legislation for the purpose of furthering reciprocal registration. Dr. Lindsay, of Halifax, the registrar, is an enthusiast, and has always taken a "keen interest." The Council of Prince Edward Island has already had the matter under discussion, and has expressed itself as "in hearty sympathy" with the scheme as laid down at the 1898 meeting of the Canadian Medical Association. At the present time it is seeking additional legislation looking toward a realization of the scheme. The Maritime Medical Association, of which Dr. R. McNeill is president, will have the matter up for discussion in July next, all of which seems to point to the fact that the profession at large is getting tired of the narrow provincial limits that at the present time exist. The Medical Council of Quebec will take up the question in July, when a favorable pronouncement may be looked for, and the Council of New Brunswick has always looked favorably upon the scheme.

In reply to a question from "M.D.," it is earnestly to be hoped that when the Dominion Parliament is ready to establish a Dominion Board there will be no "stray sheep." When once established an effort will be made to keep the standard so high that the various provinces will frame their regulations from those of the Central Board, and thus prevent the development of "stray sheep." In reply to his other question I will refer him to Dr. Roddick's address on another page.

The suggestion thrown out by "Reader," that a degree in Arts should be required as matriculation, is a good one, for it would help to remove much of the distrust now existing as to the methods of carrying on the preliminary examinations.

Members of the profession in Ontario interested in Dominion registration will watch with interest the attitude of the Medical Council of this province. It is thought by a good many that that body will place no obstacle in the way, now that there is an evident desire to keep the standard both of preliminary and of professional education high. This, together with the fact that so many members of the Council are already active exponents of Dominion registration, points toward a speedy realization of the much-hoped-for and much-talked-of Dominion Board.

EDITORIAL NOTES.

Dr John B. Hamilton's Successor.—Dr. George H. Simmons has been elected to succeed the late Dr. John B. Hamilton, as editor of the *Journal of the American Medical Association*. Dr. Simmons was formerly editor of the *Western Medical Review*, a monthly journal published at Lincoln, Nebraska.

Venereal Diseases in the British Army was the subject of a question to the Secretary for India last week, and elicited the information that the admission rate had fallen to 485 per 1,000 in 1897, as compared with 511 in 1896. The new cantonment rules were not brought into operation until towards the close of 1897, and could not be expected to do much for that year. The results of their working have not yet been ascertained, but the results for 1898, so far as they are known, were stated to be very encouraging.

A Premonitory Symptom of Chloroform Poisoning.—Lehmann (*Journal de médecine de Paris; Revue médicale*, February 1st) has made observations on three hundred and twenty-nine cases of anesthesia, in twenty-one of which was observed the fact that the patient kept the eyes partially or completely open, and reopened them on their being closed, and in each of these twenty-one cases various accidents supervened—*e.g.*, repeated vomiting (notwithstanding an empty stomach), sudden stoppage of respiration, a prolonged state of excitement, and even symptoms of asphyxia and syncope calling for persistent artificial respiration. From these observations he concludes that this symptom should be regarded as a premonitory sign of more or less serious complications.

Amnesia after Excitement.—Féré (*Belgique médicale*, July 7th, 1898; *University Medical Magazine*, March) states that amnesia and other disturbances of memory may supervene in persons ill with disturbances of the nervous system or in those hereditarily predisposed, after injuries, excessive exertion, and even after coitus; and that they may also follow pure psychic disturbances either immediately or after the patient has been exposed to them for some time. He reports the case of a woman, who had never been ill with any nervous affection, and who resided with a sister whom she loved very much. The latter became ill, and was nursed by the other with great diligence and care. The sister, however, died. The other remained apparently normal, until the corpse was being

removed from the house, when she suddenly lost all recollection of her sister. She remained in this condition several weeks, at the end of which time the recollection returned suddenly in a dream.

The Sanitary Value of Trees in City Streets.—Renewed attention to the subject of the bearing on the public health of trees in the streets of cities has been aroused by Senate Bill No. 412, now before the New York Legislature, the object of which is to provide for the systematic planting and cultivation of trees in the streets of Greater New York under the care of the Department of Parks. Dr. Stephen Smith, who has taken a deep interest in this subject for very many years, and who has studied it personally in Paris and Washington, brought this bill to the attention of the New York County Medical Association at its last meeting, and, as a result, the association sent a memorial to the Legislature, commending the bill most highly, both as a sanitary measure and as a means of improving New York City as a place of residence.—*Phila. Med. Jour.* [One thing we have to thank the aldermen of Toronto for in the past is their wisdom in adorning the streets with such arboreal beauty. The Queen City of Toronto can attribute its healthfulness in some degree, at least, to this cause.—ED.]

"Music Hath Charms," etc.—The *Cincinnati Lancet-Clinic* for February 25th quotes the following from the *Medical Press and Circular*: A correspondent sends the following festive effusion: It has been suggested that music might prove a useful adjunct (in some cases, at least) where the usual routine treatment by medicine had not proved satisfactory. I venture to suggest the following well-known airs as being suitable for the cases enumerated, viz.:

Retarded labor from inertia: "Coming through the rye."
Chronic aphonia: "The lost chord."
Melancholia: "The heart bowed down."
Epilepsy: "Let me like a soldier fall."
Cases of chronic deafness: "Come back to Erin."
Pyrexia: "McCoolin."
Cases of doubtful diagnosis: "Oh, dear, what can the matter be?"

We might suggest as additions the following:

Scarlet fever: "The lads in red."
Noises in the ears: "Tarara-boom-de-ay."
Isolation cases: "I'm so lonely."
Illegitimate pregnancy: "I have a silent sorrow here."
Nervous depression: "Cheer, boys, cheer."

—*N. Y. Med. Jour.*

Surgery among Birds.—According to the *Medical Times* for March, some interesting observations relating to the surgical treatment of wounds by birds are quoted in *Our Dumb Animals* as having been recently brought before the Physical Society of Geneva by M. Fatio. He mentions the case of a snipe which he has often observed engaged repairing damages. With its beak and feather it makes a very creditable dressing, applying plasters to bleeding wounds, and even securing a broken limb by means of a stout ligature. On one occasion he captured a snipe which had on its chest a large dressing composed of down taken from other parts of the body and securely fixed to the wound by the coagulated blood. Twice he had brought home snipe with interwoven feathers strapped on the site of fractures of one of the limbs. The most interesting example was that of a snipe, both of whose legs he had unfortunately broken by a cruel shot. He recovered the animal only on the day following, and found that the poor bird had contrived dressings and a sort of splint to both limbs. In carrying out this operation some feathers had become entangled around the beak, and not being able to use its claws to get rid of them, it was almost dead from hunger. In a case recorded by M. Magnin, a snipe that was observed to fly away with a broken limb was subsequently found to have forced the fragments into a parallel position, the upper fragments reaching to the knee, and secured them there by means of a strong band of feathers and moss intermingled. The observers were particularly struck by the application of a ligature of a kind of flat-leaved grass wound round the limb, of a spiral form and fixed by means of a sort of glue.

PERSONALS.

The *Canada Lancet* has passed into the hands of a joint stock company.

Dr. Crawford Scadding has removed to his new residence on Bloor Street West, opposite McMaster University.

Just as we go to press we find that Dr. A. H. Garratt will not be able to get away to the Richmond (Va.) meeting.

Dr. William Osler will deliver the Cavendish lecture before the West London Medico-Chirurgical Society on June 13th.

Dr. Jas. F. W. Ross, of Sherbourne and Wellesley Streets, Toronto, will be out of town from the 15th to the 30th of May.

We take pleasure in drawing the attention of our readers to the announcement of Toronto University Medical Faculty, appearing in this and subsequent issues.

Dr. Douglas, representative on the Council of the College of Physicians and Surgeons, Ontario, has returned to Cobourg from Clifton Springs, and his friends are glad to know that he has recovered sufficiently to resume his extensive practice.

The Medical Profession will regret very much to learn that Dr. William Clark Cutler, senior member and business manager of the New England Vaccine Company since its organization, died in Chelsea, Mass., on Monday, May 1st, 1899. We tender our sympathy to the firm in their severe loss.

Dr. J. C. Webster, lecturer in gynecology at McGill University, and assistant gynecologist at the Royal Victoria Hospital, Montreal, has resigned to accept the position of professor of obstetrics and gynecology at the University of Chicago. Dr. Webster is a Canadian, and is looked upon as one of the ablest in this branch in America.

Through a most unfortunate error on the part of the printers, under the heading "Current Medical Literature," appearing in the April issue of the *Montreal Medical Journal*, the original contributions which appeared in the February issue of The Canadian Journal of Medicine and Surgery were attributed to the *Canadian Practitioner* instead.

Dr. Elmore S. Pettyjohn, who for years has been medical superintendent of Alma Sanitarium at Alma, Mich., has leased that institution for a term of years, commencing on the 1st of last month. Dr. Pettyjohn has ere this established a reputation for himself in sanitarium work, and we extend to him our congratulations on taking so important a step as this, feeling sure that he will yet meet with an increased degree of prosperity, something which his personal popularity but deserves.

Dr. B. L. Riordan and Mrs. Riordan, Dr. W. A. Young and Mrs. Young, Dr. J. Noble, Dr. C. R. Dickson, Dr. T. McKenzie, Dr. W. H. Pepler and Mrs. Pepler, Dr. Herbert Bruce, all of Toronto, left last week to attend the convention of American Railroad Surgeons at Richmond, Va. After the meeting is over, the party will visit such places of interest as Old Point Comfort, Va., White Sulphur Springs, and then go over to Columbus, Ohio, and attend the meeting of the American Medical Association, opening on the 5th inst.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

DOMINION REGISTRATION.

Sir,—In your May issue I was pleased to see an editorial on the important subject of Interprovincial or Dominion Registration. I hope the journals throughout the length and breadth of our Dominion will follow your good example, and lay the whole question before the profession.

Permit me to ask one or two questions. Suppose one province refuses to have anything to do with a Dominion Board, will it be possible for the Dominion Parliament to so enact a law compelling the "stray sheep" to come into the fold? Suppose all the provinces are agreeable, has the Dominion Parliament power to establish an educational institution for the purpose of granting diplomas for practice in all parts of the Dominion?

Yours truly,

May 9th, 1899. M. D.

INTERPROVINCIAL REGISTRATION.

Sir,—Your journal, which is so rapidly gaining the respect of the reading part of the profession, seems to be on the right side in reference to reciprocal registration. I am glad to see that a scheme which at first sight appears practicable, is now being agitated. It does seem to me, as a patriotic Canadian, that no obstacles should be put in the way of bringing about some system of Dominion registration, but I would warn those who have to do with it that they should start off with a very high standard of preliminary education. I would suggest that candidates for a degree from what you are pleased to style "Dominion Board," should be graduates in Arts of some British or Canadian university. This being the case the arrangement of the professional course will be an easy matter. If this were done I am sure that the few members of the Medical Council of this Province, who are still fearful of the scheme, would be won over to the cause, and it is a grand one.

May 5th, 1899. Reader.

The Physician's Library.

BOOK REVIEWS.

Annual and Analytical Cyclopædia of Practical Medicine. By Charles E. de M. Sajous, M.D., and one hundred associate editors, assisted by corresponding editors, collaborators and correspondents. Illustrated with chromo lithographs, engravings and maps. Vol. III. Philadelphia, New York, Chicago: The F. A. Davis Company, publishers. 1899.

To review a quarto of 600 pages is not a light task, especially if, as in that one now before us, each article under the alphabetic headings has been written by a specialist. A simple review of one of the more notable articles would be instructive and reassuring, inasmuch as it reveals such advances as have been made, eliminating the useless and retaining the trustworthy. We shall simply record a few observations, made while reading the work.

In the article on "Dysentery," we notice that one ounce of a saturated solution of sulphate of magnesium and ten drops of dilute sulphuric acid are used successfully in that disease.

In the article on "Eclampsia," venesection, followed by subcutaneous or endovenous injection of a normal salt solution, is favorably spoken of. Veratrum viride is also commended. In the last five lines at the end of this article, the words "latter" and "former" should be transposed.

In the article on "Eczema," no mention is made of pulvis cuticolor and red Armenian bole and eosine, which are now used by Unna and Rausch to color oxide of zinc preparations, intended for the face.

The article on "Empyema" is well written. In the last reference, which is translated from the French, the quoted formula should probably be: Chloride of sodium, 5 grammes; sulphate of sodium, 1 gramme; aq. destillata, 1 litre. It would be conducive to accuracy, in some cases at least, if physicians were allowed to translate the weights and measures of the metric system as they appear in a citation, into American or Imperial standards. Rhus aromaticus, which is recommended in the treatment of enuresis is a new, and it is to be hoped, a more efficient agent than its predecessors.

The article on "Epilepsy" contains many valuable hints. The dietetic recommendations are wise, and the endorsation of bromide of potassium sound.

In the article on "Erysipelas," the recommended local treatment is based on the theory that antiseptics, viz., hydrarg. perchloride, phenol, camphor and phenol, applied on, or in advance of, the spreading inflammation prevent its advance by exercising an inhibitory effect on the streptococcus. A 10 per cent. preparation of ichthyol in collodion and Lobit's combination of iodol and collodion would probably exert a mechanical, as well as an antiseptic influence on the seat of inflammation. Nitrate of silver in stick, applied to sound tissue beyond the inflamed area, probably inhibits the advance of the streptococcus by mobilizing a large detachment of phagocytes across the path of the disease, and stopping its spread, though it must be confessed at the expense of the patient's personal appearance.

The article on "Formaldehyde" will help to place this modern antiseptic in its true relation to corrosive sublimate. Its uses in genito-urinary surgery are also developed.

The article on "Gelsemium" is useful, if for nothing else but to show its many therapeutic uses to Canadian physicians, who are not in the habit of using it.

The article on "Gout" is very readable. The advice on diet is sound, and will please many sufferers who do not wish to adopt Haig's views. One most important point in preventing the development of an attack, "keeping the patient's colon empty," is not sufficiently dealt with.

The statement made by W. Koch that hemophilia is due to scurvy, is suggestive, and opens up new vistas in the treatment of various obscure hemorrhages.

The article on "Hemorrhoids" is particularly good. The conclusion in favor of the clamp and cautery as the best surgical treatment is reasonable.

The article on "Hip-Joint Disease" is most readable. The same may be said of the article on "Hernia."

The articles on "Hypnotism" and "Hysteria" show a great capacity for observation and a fund of acquired knowledge. The treatment of hysteria is good, though no mention is made of that old weapon, pil. aloes et asafetida.

The article on "Ichthyol" is very interesting, especially as the preparations of this product are now extensively prescribed internally and externally. Dr. le Tanneur's views as to its efficacy in phthisis pulmonalis, bronchiectasis and purulent catarrh are worthy of notice, and his practice deserves imitation.

The final article on "Cretinism" presents this rare condition very neatly in word pictures, but a few photographs would help powerfully to give the reader a better grasp of what is described.

The publishers deserve credit for the beautiful typography of the volume.

J. J. C.

The Pathology and Treatment of Sexual Impotence. By Victor G. Vecki, M.D. Philadelphia: W. B. Saunders. Canadian Agents: Carveth & Co., Toronto. $2.00.

Until very recently the phenomena of sex, with all that pertained thereto, remained a *terra incognita* into which very few reputable medical writers cared to enter. Even at the present day the natural exercise of the function by the healthy, except within the most prescribed artificial limits, is regarded by the laity as a form of vice, and a very loathsome and reprehensible vice at that, compared to which gluttony and drunkenness are only venial offences. Possibly the reticence of both the profession and the public upon the subject has in the past been due to a prudish sense of decorum. By charlatans, however, the subject has been exploited *ad nauseam*; and when matters reach such a pass that one cannot pick up a newspaper without finding such disgusting advertisements addressed to sexual hypochondriacs—advertisements that would be ridiculous to the more intelligent reader if they were not so contemptibly indecent—it would seem high time that the subject was treated by responsible writers. The present work is excellent throughout, and though much of what it treats must already have occurred to any person of ordinary common-sense, much will also be found that will repay a careful reading. There are so many gloomy neurotics claiming without reason to be suffering in this way, and going from physician to physician with their harrowing tale of woe that it is easy for one who listens to their disclosures to form most erroneous ideas of the cause and symptoms of this neurasthenic condition.

E. H. S.

Practical Materia Medica for Nurses. With an Appendix, containing poisons and their antidotes, with poison emergencies; mineral waters, weights and measures, dose list, and a glossary of the terms used in materia medica and therapeutics. By Emily A. M. Stoney, graduate of the Training School for Nurses, Lawrence, Mass., late head nurse Mercy Hospital, Chicago, Ill.; late superintendent of Training School for Nurses, Carney Hospital, South Boston, Mass.; author of "Practical Points in Nursing." Philadelphia: W. B. Saunders, 925 Walnut Street Canadian agents, Carveth & Co., Toronto. 1899.

This book has been issued as a companion to "Practical Points in Nursing," which has had so large a sale as to stimulate the author to greater efforts. There is little doubt of the fact that there are too few books of reference specially suited to the wants of those who have undertaken as their life-work, the

noble occupation of nursing the sick and the afflicted. The book is divided into three parts. Part I. deals with the classification of drugs, Part II. with materia medica, and Part III. with such subjects (so important to nurses) as the dose list, weights and measures, poison emergencies, confinement table, mineral waters, glossary, etc., etc. We think it most useful that doses of drugs should be given in both metric and apothecaries' weight. This has been done in this book, and will be found valuable by all nurses. There is little doubt that Miss Stoney's book will have a large sale. W. A. Y.

The Journal of Tuberculosis. A quarterly magazine devoted to the prevention and cure of Tuberculosis, Asheville, N.C. Karl von Ruck, B.S., M.D., editor. April, 1899.

We received three weeks ago this journal in its enlarged form. The issue of April contained amongst its original contributions one by Dr. Chas. A. Denison, of Denver, Col., on "A Plea for the Better Appreciation of the Tuberculin Test for Latent Tuberculosis"; one by Dr. H. Longstreet Taylor on "The Tuberculin Test in the Early Diagnosis of Tuberculosis." Dr. J. H. Williams also published in that issue a report of twelve cases of pulmonary tuberculosis, and Dr. H. J. Chapman a paper on "The Care of the Digestive Tract in Tubercular Patients." The editor announces the intention of making *The Journal of Tuberculosis* "a publication representing the best American endeavor in dealing with the prevention and treatment of the disease to which it is specially devoted." We feel sure that such will be the case, as Dr. Von Ruck has given many years of careful and laborious study to the subject. The *Journal's* subscription price is but $1.00 per annum. W. A. Y.

The Cruise of The Cachalot. Round the World After Sperm Whales. By Frank T. Bullen (First Mate). Toronto: William Briggs. Cloth and Paper.

A wonderful book, enthralling in its well-told encounters with the inhabitants of the mighty deep. A tale that has seldom been told before, and never so thrillingly. Many an old salt will hear "four bells" chime ere he finds his interest lag, or pauses to pity, perchance, the placid lives of the land-lubbers.

LITERARY NOTES.

The Smith, Kline & French Co., of Philadelphia, Pa., recently issued a diet list for the most prominent diseases. It will be found to be very valuable to practitioners. Physicians in many cases have, in giving directions as to the use of certain forms of diet in particular classes of illness, almost had to go into the kitchen themselves to superintend the preparation of such foods. This will be avoided entirely by the use of such a diet list as that of this firm, all the attendant physician has to do being to tear out a slip and hand it to the patient's friends. This list includes different diets for typhoid fever, acute febrile diseases, post-operative diet, nephritis, cholera infantum, dyspepsia in its different forms, diarrhea and debility.

The firm of Geo. Morang & Co., Limited, who recently moved into handsome new quarters, at 90 Wellington Street West, this city, and who are Canadian agents for the well-known house of Appleton & Co., New York, are to be congratulated on securing the services of Mr. A. P. Watts, who recently joined their firm. Mr. Watts is too well known to the profession all over this country to require any introduction. He was the principal of the firm of A. P. Watts & Co., Toronto, and for many years now has been closely identified with the medical book trade of this country. He is a careful and shrewd business man, and through square dealing, not to speak of personal popularity and *bonhomie*, has won many friends among the doctors. There is no one in Canada who has this class of trade at his finger tips better than A. P. We feel sure that the Morang Company will find that their medical book trade will increase from month to month with this gentleman at their right hand.

Selected Articles.

AUTOMOBILES FOR MEDICAL MEN.

In writing on this subject the *Medical Record* says: As yet the horseless carriage is not looked upon with favor by the majority of medical men. Like the bicycle, it is not considered a means of locomotion quite in keeping with the dignity of the profession. No class, perhaps, is more tied down by ethical considerations than the medical. Notwithstanding the objections that may be brought forward against the automobile when viewed from this standpoint, there is no doubt that if it can be plainly shown that it possesses decided advantages over the much-loved horse as a means of traction, all this prejudice will quickly pass away. In France to a greater extent than in any other part of the world has the motor carriage taken root and flourished. About twelve years ago a steam motor vehicle was first seen on the streets of Paris, and the sensation it created may be better imagined than described. Unsightly, ungainly, and vomiting smoke and steam, it was a terror alike to man and beast. In the summer of 1898 an automobile exhibition was held in Paris at which more than a thousand of these invisibly impelled carriages were on show, and the wonderful improvements in shape, beauty, and speed that have been effected in twelve years were fully exemplified.

To return, however, to the question as to whether the horseless carriage is a suitable conveyance for the medical man, it should be said that before passing any opinion on the subject many points must be taken into consideration. The *British Medical Journal*, referring principally to oil motors—which are practically the only ones used in Europe on account of the difficulty of obtaining electric motive power—says: "It is obvious that the real value of a motor car to a medical practitioner must depend on the efficiency of the motor or engine by which it is driven. Choice of a vehicle is really the choice of a motor." Here in this part of America, where almost all small towns and often villages have their power-houses, the conditions are different. The motive power is at hand, and it is not a matter of choice. The superiority, then, of a conveyance driven by electricity over one pulled by a horse would seem to be: "First, that after the initial cost it is cheaper; second, that, unlike the horse, a uniform rate of speed can be kept up; and, third—and a most important point in those parts of the country where the winter is long—it can run unimpeded through snow and without slipping on the icy pavements. Added to these

advantages the horseless carriage possesses this distinctive quality, that it is ready at any hour of the day or night without the need of coachmen; thus making the doctor who owns one a most independent individual; and, lastly, that by taking his key with him the doctor can leave his carriage alone and unprotected. The *Lancet* of March 20th, 1897, commenting on the use of this description of vehicle for country practitioners in Great Britain, says: "It seems that motor carriages should prove especially useful to the general practitioner, and particularly to the country one, on whose shoulders the burden of maintaining the two or three horses, with their attendant expenses, necessary for a large and scattered practice, falls very heavily. At present the initial cost is large, but on the other hand the cost of working them is small, and the country roads in England, unlike those of America, are peculiarly well adapted to their use." Fears have been expressed that the horse will be altogether driven out of the field by the motor carriage, but we venture to think that this will not be the case. In fact, it appears more likely that in the long run the horse will be the greatest gainer by the new order of things. No longer will he be compelled to shiver in the cold while standing at the door of a patient's house, no longer will he be urged by whip when time is precious, or be overworked in any way, but will be relegated to his proper place—as a friend to be well treated and as a luxury to be enjoyed in leisure hours. Of course the time has not yet come —and probably many years will elapse ere it does come—when it will be possible to use motor carriages in all parts of the country. Still, this much may be said—that in those places where electric power is available the advantages of the automobile will become more and more patent to the medical man. The motor carriage, however, is by no means perfect, and perhaps its most unpleasant defect is the horrible humming noise it makes when travelling through the streets of a town. Nevertheless, looking at the rapid strides made in the direction of improvement within the past few years, there is every reason to hope that this objection will be eventually entirely overcome.

"JUST AS GOOD."

THE opposition to proprietary preparations has always seemed to us to be not only unreasonable but in direct line to work harm to the profession. That these products possess intrinsic and superior qualities is proven by the fact that imitations are being continually foisted upon patients directly and the profession indirectly by unprincipled individuals whose only excuse is that a cheaper product is "just as good." We will not stop to discuss this, as there can be but one opinion in the matter. It is substitution, and the substitute will never respond to the tests which have proven the original to be

meritorious. It is obvious that good preparations only are ever imitated. They have established reputations for themselves, and necessarily created a demand. This having been accomplished, a plausible substitute, usually worthless and always cheap, is not only offered in lieu of the genuine as being "just as good," but the fraud is pushed one step further by deliberately substituting a product without value for one of proven worth. This is one of the best of the arguments advanced for the practice of physicians dispensing their own drugs. By prescribing the remedy in original packages and instructing patients how to detect any fraud as certain, a result in a way of obtaining the genuine article is attained.

A new fraud has cropped up recently, and it is one not so easily detected by the physician. He must be very well posted and on the alert to discover it, and it is a double wrong which is perpetrated. As the *Medical Register* says:

"Whenever a preparation of value is perfected by the enterprise and patient investigation of any manufacturing chemist, there immediately appear upon the market a score of imitations, the manufacturers of which have expended upon their product a minimum of time, capital and brains. To trade thus upon the reputation of an established remedy by similarity of name is culpable enough, but to go further and appropriate for the imitation the literature of the original, making it appear that certain investigations which have proved the value of a given remedy apply not to this particular product, but to the crude ingredients which it contains, regardless of the special manner in which they are combined, is a form of imposition which should not be tolerated."

This may be "smart" and "business shrewdness" on the part of those guilty of such practices, but in the opinion of the more decent and honest part of the community it is scoundrelism of the most depraved sort. Filching the fruit of another's work, and appropriating the good name of a remedy for the purpose of deception, are deeds that should not only be discountenanced by the profession, but attended by fit punishment. Appropriating the literature is not the only evil which has been wrought. Those unprincipled individuals who have done this have gone so far as to publish the results of the investigations of physicians of repute on a genuine product as referring to their own inferior mixtures. Not only this, but they have had the audacity to append the names of the physicians. The difference between the original and assumed reports lay in the substitution of the similar name of the "just as good" imitation for that of the original and meritorious preparation.

This question is one of more than ordinary importance to the manufacturer, but it is little less so to him who employs his products. The honest manufacturer cannot afford to have his product hurt, even by implication. He cannot afford to lose his legitimate trade, acquired in a legitimate manner. In fact, he has everything to lose, whereas the pirate who tries to appropriate the reputation of his product has all to gain and possesses nothing worth losing.

The medical profession cannot afford to reap ill-success because it will not take the trouble to investigate these frauds. It is absolutely necessary to do so, and its cry to substitutors and all the fraudulent gentry should be: "*Cave canem.*"—*St. Louis Med. and Surg. Journal* (Editorial).

PERTUSSIS—ITS CONSTITUTIONAL TREATMENT.

THE host of remedies recommended for pertussis indicate that many drugs give slight relief, while none are of striking value. In the most recent work on therapeutics fifty-six drugs are mentioned as useful in this disease, while in another sixty-three are mentioned. Antipyrin, all things considered, is most effective. "After having prescribed it hundreds of times for children during the past six or seven years," says one writer, "I have yet to see unpleasant results from its use." Antipyrin does not cause depression, as it sometimes does in adults, and very rarely any rash. In the majority of cases it notably mitigates the severity of the paroxysm and markedly reduces their number, usually as much as one-half, but it rarely causes them to entirely disappear. It certainly largely reduces the danger of complications. It does not, however, materially reduce the duration of the disease, though in some cases it has that effect. Antipyrin certainly does check the vomiting which so often is the result of each paroxysm, more frequently than any other drug. This drug is best administered in solution of water, to which a little syrup of tolu is added, which well covers its bitter taste. The initial dose for a child one year old is one and a half grains every four hours, for a child of four years two grains every two hours. The interval between the doses may be rapidly reduced to two hours. Quinine is the favorite remedy of many practitioners, and is unquestionably effective. It must, however, be given in large doses, not less than ten grains being required daily for a child of four years. It frequently, however, causes vomiting, and many parents object to giving it in such quantities. Some practitioners, who have a large experience, speak very positively of the advantages of a combination of antipyrin and the bromides, especially with Peacock's solution of the bromides, the latter being very suitable indeed for carrying a salt like antipyrin. Of this mixture it is advised to commence with eight grains of antipyrin in a drachm of the bromide solution three times a day, gradually increased to ten grains of the former and two drachms of the latter *t.i.d.* This mixture has a therapeutic value of considerable worth and produces most encouraging clinical results. Belladonna has long enjoyed high repute in pertussis, a repute which some think has been overestimated. It must be given in large doses to be effective and is a dangerous drug in careless hands; many fatal accidents result yearly from its use. Its physiological effects, if long continued, are

extremely unpleasant. Some have found alum of undoubted benefit in cases marked by profuse secretion; it is cheaper than antipyrin, is easily administered, and is well tolerated in solution with a little syrup of lemon in doses of two grains every three or four hours at two years. If expense is an element of importance, alum may be alternated with antipyrin. Children sometimes continue to cough and vomit after the disease should naturally begin to subside. In such cases oxalate of cerium is useful, except possibly during the first three weeks of the disease. Opium has undoubtedly the power to control the paroxysms, but it is not a proper drug for long-continued use. Occasional doses, however, are quite proper to secure rest when sleep is broken at night. Codia is one of the best forms for such use: a child two years of age may receive one-tenth of a grain, to be repeated if necessary. Trional may be employed to secure sleep, and chloral may also be used for the same purpose.

THE NUTRIENT VALUE OF MEAT PREPARATIONS.

BY DR. R. A. BOLAM.

THE names of trade preparations are "for obvious reasons" suppressed, which detracts from the value of a useful paper. We fail to see why the profession should not be supplied with a reliable and independent report on all the meat preparations in the market; such would be greatly esteemed. Carefully home-made beef tea contains 2.5 per cent. alcohol precipitate, mainly proteid.

The different commercial preparations are grouped under four heads:

I. *Beef extracts*, of which Liebig's is the type, are made by extracting meat at at least the boiling point. They have practically no nutritive value, but are valuable adjuncts to a sick dietary on account of their stimulating and restorative properties and savory taste. The beef teas made from them come as a welcome relief to milk.

II. *Beef juices* are expressed from the meat and preserved in a condition approaching the raw material as nearly as possible. The majority are unpalatable. In the more concentrated alcohol is used as a preservative. Analyses of those most commonly used showed a proteid merit varying from 8 to 11.5. But the cost is relatively exorbitant. When it is remembered that the proteid merit of lean beef is 20, and that the best of these juices has little more than half its food value, it is evident that the homeopathic doses usually given can have little nutrient value. But they are useful when digestion is at its feeblest and an effort must be made to tide over a crisis by repeated doses of some nutrient and stimulant fluid.

III. *Beef jellies and essences* give 9 to 11 per cent. alcohol precipitate, which consists, instead of proteid and gelatin, as might be expected, almost entirely of mucin. Although mucin is a compound proteid it is very doubtful if its food value is even as good as gelatin. It is to be suspected that they are manufactured much as calf's foot jelly is, and that the only difference lies in the addition of the flavoring principles of meat. As foods, then, they are of little worth. They have no advantage over home-made beef tea.

IV. *Fluid beef preparations*, now largely exploited on account of their relatively high proteid value, are very much alike in composition and mode of manufacture. They consist essentially of a Liebig extract, often of soft consistence, to which a considerable proportion of finely-divided dried beef has been added. The muscle fibres and numerous phosphate and chloride crystals can be readily discerned by the microscope. The added meat, of course, has been coagulated by heating, and when the fluid beef is mixed with hot water as directed, the liquid has much matter in suspension which forms a considerable sediment, containing practically all the proteid present.

The proteid merit of four preparations varied from 10.5 to 26.5. These preparations stand pre-eminent in their nutrient value, and the best of them present all the qualities of good lean meat in a handy and palatable form. It must always be remembered, however, that even fluid beef is only a little more nutritious (as 5 to 4) than the original meat, and must, therefore, be prescribed in proportionate amount. The statements current in advertising literature, as to the concentration of such products, hold good only for the extractives and salts, not for the important proteid constituents.—*The Med. and Surg. Review of Reviews.*

THE THERAPEUTICS OF GOUT.

The treatment of gout ranges over a wide field—according to the phases of the complaint, the kind and nature of the local manifestations, and the age, temperament and antecedents of the patient.

Treatment of gouty paroxysm.—The treatment of acute gout is conducted in the main on the same lines as that of other inflammatory ailments. At the outset the bowels are relieved by a suitable purgative: if the fever runs high the patient is confined to bed; the inflamed joints are kept at rest, the diet should consist of milk and farinaceous articles, and diluents should be freely administered. It is necessary, however, to bear in mind the specific character of the inflammation. Gouty patients bear bleeding badly, and neither venesection nor the application of leeches is to be recommended. The application of cold to the inflamed joints must be strongly deprecated: such a proceeding involves serious risk of metastasis of

the morbid process to the internal organs. The joints should be simply swathed in cotton wadding covered over with oil silk. This appliance acts as a light poultice and promotes cutaneous transpiration and a kindly development of the tumefaction, which is usually followed by great relief of pain. Repeated purgation is undesirable. During the inflammatory period the use of meat should be avoided and alcoholic beverages also withheld. In sthenic cases during the febrile period the acidity of the urine should be controlled and its volume increased by the systemic exhibition of bicarbonate or citrate of potash, combined frequently with some salt of lithium; one of the most effectual combinations of such being Cassava, containing carbonate of lithia, bicarbonate of potash and citrate of potash āā grs. v., p. ext. cascara and p. ext. kava kava āā gr. ¼. to each drachm of the compound. For the purpose of controlling the gouty inflammation and shortening the attack, a most useful preparation is colchicum, ten to twenty-five drops of the wine or tincture two or three times a day, though care with this drug must be used as some experience a sense of faintness after taking it. Iodide and bromide of potassium, salicine, the salicylates are also used with sometimes striking effect. Alkaline substances have for a long time past been employed largely in gout, both as pharmaceutical preparations and as components of mineral waters. Of the latter Vichy natural waters have been found most helpful owing to containing, as they do, so large a percentage of such ingredients. Sedentary occupations and idle habits of life are highly injurious to gouty persons, and tend strongly to promote recurrent arthritic attacks and to engender the various irregular manifestations of the disease. Gouty persons should be encouraged to lead an active out-door life, taking exercise systematically in the open air in the way of walking, horse-riding and driving. Gouty persons should also avoid heavy dinners and late hours. The body should be clothed in light flannels, and the action of the skin promoted by the use of baths and friction.

PASSING OF PRESCRIPTIONS.

It appears to be a fact that the prescription business of druggists is lessening in this country; as much as 50 per cent. is the estimate of the author of a paper recently read before the Maine Pharmaceutical Association and published in the *Pharmaceutical Era*, March 9. He does not discuss the reasons for this fact, which are, perhaps, more obvious to medical men than to pharmacists, but dwells at length on its disadvantages, as it is natural he should. His paper, however, is not altogether a labored *ex parte* plea, for it contains a number of points that are worthy of consideration.

Leaving aside the occasional necessity of the physician being his own dispenser, especially in country practice, the unreliability of

many druggists, a fact made known by experience to many physicians, the introduction of the tablet triturates, and the various granules, parvules, etc., which, with some objectionable and many valuable features, have apparently come to stay among us; leaving out all these together with others that might be mentioned, there are still good reasons for regretting the disuse of the prescription, and some of these are fairly stated by the writer referred to above. It must be admitted by all that the physician who can readily compose a really good original prescription, for whatever ailment, is a higher grade man in some respects than one who is not thus qualified, and it cannot be denied that with the use of all the modern facilities for self-dispensing, this accomplishment of ready prescription-writing is becoming to some extent a lost and disappearing art. It indicates too often, it is to be feared, a lessened familiarity with materia medica, which in itself is an indication of medical indolence or lack of study. The old, much-abused, polypharmacy of the shotgun prescription was in some regards less evil in its tendencies than this.

It is doubtful whether the medical profession can ever dispense with the qualified pharmacist by dispensing its own drugs. This being so, whatever tends to degrade or render *functus officio* the pharmacist is liable to have its recoil on our profession. It is for our interest as well as the druggists' that such an outcome should be averted. The dignity of the medical profession, whatever we may say about it, is also somewhat compromised if we are to be apothecaries as well as physicians, and to some of our clients we may come to be regarded as only a higher grade of drug peddler—the mercantile rather than the professional side appealing more directly to their mental apprehension. The remedy for all the possible disadvantages lies in our taking a middle course, not discarding the good there may be in controlling the administration of our remedies, not giving up the aid we have had in the past from the dispensing pharmacist. And above all we should, as members of a learned profession, seek to never lose any prestige given the time-honored customs of the past. The physician of to-day should be able to prescribe as well as be, in a fashion, his own compounder.—*Edit. Journal of Amer. Med. Assoc.*

THE INCREASE OF CANCER.

THOSE are startling words that occur in Dr. Roswell Park's article on "A Further Study into the Frequency and Nature of Cancer" in a recent issue. *If the present increase in the death-rate from cancer continues, ten years from now, i.e., in 1909, there will be more deaths in New York from cancer than from consumption, smallpox, and typhoid fever combined.* But that the statement comes from so worthy and conservative a source, one of our best

known American surgeons, who is besides recognized as a special authority on cancer, and whose investigations on the subject have added so much to our knowledge that was valuable and suggestive, we should be inclined to doubt the possibility of there being any truth in the sombre prophecy.

Dr. Park is not, however, alone in his conviction that cancer is rapidly on the increase. The best English and French authorities on the subject are agreed that the affection is much more prevalent among their respective countrymen and women than it was twenty years ago. Billroth pointed out in the early '90s how rapid was the increase of cancer cases in recent decades in the Vienna General Hospital. Nothnagel, in 1897, confirmed this report for later years, and in the volume on "Intestinal Diseases," in his system of "Specielle Pathologie und Therapie," reports a conversation with Billroth just before the great surgeon's death, in which they were agreed that the increase in the frequency of cancer was noticeable, not only among hospital patients and the poorer classes, but also in the private practice and among the wealthy patients. Nothnagel finds that the experience of the last five years has only confirmed this impression.

It is evident then how important a subject the etiology of cancer is becoming. State aid has been asked for its investigation and it is clear that the object is an eminently proper one. A great question of public health, one that is every year becoming more urgent and serious, is involved. If, as Professor Park's investigations and his copious gleanings from medical literature all over the world seem to indicate, the cause of cancer is a parasite, its discovery and the investigation of its biological history would probably confer upon mankind one of the greatest blessings that medical science could bestow. The subject is a most interesting one to medical men, and while no effort should be spared to make the personal observations of every cancer case as complete as possible so that it may be of scientific medical value, every member of the profession should encourage by every means in his power the present earnest effort to make the serious investigation of the etiology of cancer one of the great problems that our Empire State shall solve for her own and the world's benefit.—*Medical News.*

TUBERCULOSIS IN THE INSANE.

Dr. H. H. Tomlinson, superintendent of the St. Peter's Asylum, Minnesota, published in the *New York Medical Journal*, March 11th, an interesting paper on the observations and findings as to phthisis in the insane. The period of his study covers from January, 1895, to 1898, during which time fifty patients succumbed to the disease. None of these had their condition thus diagnosed on admittance, and tuberculosis appears to have originated during

their residence. The special type of the disease, in the great majority of these cases, was a peculiar one. There was little emaciation until shortly before death, and rational signs were largely absent or not so marked as cases outside the institution. Attention was generally first called to these cases by the elevation of the temperature, general weakness, and sweating.

The course of the disease was often greatly prolonged, and even after the patient had taken to his bed he might continue a merely vegetative existence for months or even a year. The condition of the lungs on *post-mortem* was also peculiar; the cavities were few and small, the lung heavy, its tissue dense, the basis often only a mass of dense fibrous tissue, and the only normal-appearing portions were found in the middle and anterior regions of the lungs. Dr. Tomlinson calls attention to the close resemblance existing between these conditions and those of bovine tuberculosis, except that in the latter, the animals having been killed, the stages are not so advanced. Undoubtedly the conditions must have existed for a long time before attention was called to them.

The doctor recapitulates his paper by stating that phthisis in an old institution like St. Peter's is relatively more common than in the general population; for the last year covered by the paper, the percentage of deaths was forty-six. It is most common among degenerates, in whom the lungs and kidneys are both likely to be affected with the connective-tissue degeneration described. He considers this tendency to connective-tissue degeneration to be especially a manifestation of inherent defect; in other words, a symptom of degeneracy. In seventy-two *post-mortems* made during the period, he found all more or less involved as to the lungs and kidneys. In no case was there a perfectly healthy condition found. He therefore accounts for the relative frequency of tuberculosis in the insane to this original defective tendency of the organism, rendering them the more liable to infection and morbid conditions favored by the overcrowding, etc., in such institutions. —*Louisville Journal of Surgery and Medicine.*

A HOUSE EPIDEMIC OF SYPHILIS.

BY WILLIAM S. GOTTHEIL, M.D.

Thanks to a better knowledge of the dangers and modes of transmission of syphilis, and to superior habits of cleanliness, epidemics of the disease are rare in America; yet they occur among the lower classes of our population with greater frequency than is generally supposed. In the *New York Medical Journal* of March 26th, the writer records one in which the disease was introduced into the family, according to history, by vaccination, and in which

every member of the family of eight was ultimately infected. The first case was a child of two years; then the mother, aged 34; then two girls, aged 9 and 14 respectively; then a boy of four; then a girl of seven; and then a nurseling, aged six months. The father escaped until the last; but late in the spring he came to the clinic with a characteristic eruption, alopecia, etc. The cases were all severe; there were several irites; all had obstinate and some very extensive mucous patches; and the two-year-old child had a syphilitic pneumonia. The site of inoculation was discoverable in two cases only, probably on account of the lateness and irregularity with which the patients were brought to the clinic. In the mother it was upon the centre of the cheek, and in one girl it was upon the eyelid. The family were very poor, living in one room, and their habits were very uncleanly.—*Author's Abstract.*

A CURIOUS POCKET-PIECE.

In the *New York Medical Journal* of February 4th, 1899, Dr. William S. Gottheil describes a case in which a woman carried a piece of her own skull in her pocket for years, "for good luck." She appeared for treatment for a different affection, and it was discovered incidentally that a syphilitic periostitis had begun again around the scar left by the ulceration from which her piece of bone had come twelve years before. As in the present case, she had not at that time attached sufficient importance to the matter to consult a physician about it. The sequestrum, of which she was quite proud, was an ovoid piece of bone measuring $2\frac{1}{4}$x2 inches, and was composed of two adjacent portions of the two parietal bones, the sagittal suture in the middle showing beautifully. Its upper convex surface showed the outer table of the skull intact. The under concave surface was composed mostly of cancellous tissue; but all along the middle line, at the suture, the inner table was present, showing that at that place the entire thickness of the skull had been lost.

Apart from its curiosity, the case is of interest as showing the very extensive destruction of important organs that can take place in syphilis without systemic reaction or much personal inconvenience. The entire thickness of the skull had been destroyed, and the meninges necessarily exposed; yet the inflammation had not spread to those membranes, and the patient had hardly considered herself sick.—*Author's Abstract.*

The annual report of the Ontario Board of Health for 1898 is just to hand and contains much important information on matters pertaining to the health of the Province.

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